HITACHI

Inspire the Next

SERVICE MANUAL

PA

No. 0235

P50S602 / D8UF
P50A202 / D8UF
P50A402 / D8UF

NTSC
ATSC

D8UF
Chassis

R/C: CLU-4984S

SERVICE MANUAL REVISION HISTORY INFORMATION

DATE	REVISION #	REASON
May 28 2008	SM00001	FIRST ISSUE OF MANUAL

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PLASMA DISPLAY PANEL

MAY 2008

HIMEX MANUFACTURING DIVISION

HITACHI

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TO GO TO A CHAPTER, CLICK ON ITS HEADING BELOW

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CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Before servicing this chassis, it is important that the service technician read the “IMPORTANT SAFETY INSTRUCTIONS” in this service manual.

SAFETY NOTICE: USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this service data and its suplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the “Important Safety Instructions” in this service manual.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PLASMA DISPLAY PANEL

MAY 2008

HIMEX MANUFACTURING DIVISION

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety-related notes located on or inside the cover case and on the chassis or Plasma module.

WARNING: Since the chassis of this receiver is connected to one side of the AC power supply during operation, whenever the receiver is plugged in service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

1. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a “HOT” chassis receiver.
2. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, insulating cover-shields, and isolation resistors, capacitors, etc.
3. When service is required, observe the original lead dress.
4. Always use manufacturer’s replacement components. Critical components as indicated on the circuit diagram should not be replaced by another manufacturer’s. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of over heating.
5. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

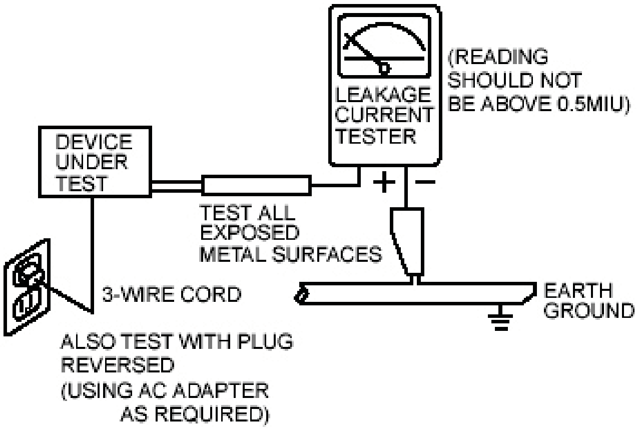
With the AC plug removed from the 120V AC 60Hz source, place a jumper across Line 1 and Line 2 of the three plug prongs, do not connect with the third prong, which is physical ground.

Using an insulation tester (DC500V), connect one of its leads to the AC plug jumper and touch with the other lead each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis should have a resistor reading over 4MΩ. Any resistance value below this range indicates an abnormality which requires corrective action. An exposed metal part not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with the American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances. Measure from across Line 1 and Line 2 of the three plug prongs, do not connect with the third prong, which is physical ground, to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 MIU. Reverse the instrument power cord plug in the outlet and repeat test.

AC LEAKAGE TEST


LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5MIU)
DEVICE UNDER TEST
+
−
TEST ALL EXPOSED METAL SURFACES
3-WIRE CORD
EARTH GROUND
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER AS REQUIRED)

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

NOTE:
Always unplug the PDP TV set from the power line before servicing.
This TV set does not have a Main Power Switch.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified with a ⚠ mark in the schematics and parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement component, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manuals may be obtained at a nominal charge from HITACHI Sales Corporation.

PLASMA TV

1. Follow the general caution recommendations from “Safety precautions” section.
2. If necessary to replace Panel module, this work must be started after the panel module and the AC/DC Power supply becomes sufficiently cool.
3. Special care must be taken with the display area to avoid damaging its surface.
4. The Panel Module shall not be touched with bare hands to protect its surface from stains.
5. It is recommended to use clean soft gloves during the replacing work of the Panel module in order to protect, not only the display area of the panel module but also the serviceman.
6. Signal, power supply P.W.B.’s and PDP driving circuits P.W.B.’s are assembled on the rear side of the PDP module, take special care with this fragile circuitry; particularly, Flexible Printed Circuits bonded to surrounding edges of the panel.

They are not strong enough to withstand harsh outer mechanical forces. Avoid touching the flexible printed circuits by not only your hands, but also tools, chassis, or any other object. Extreme bending of the connectors must be avoided too. In case the flexible printed circuits are damaged, the corresponding addressed portions of the screen will not be lit and exchange of the panel will be required.

SAFETY NOTICE
USE ISOLATION TRANSFORMER
WHEN SERVICING

POWER SOURCE

This PDP television is designed to operate on 120 Volts/60Hz, AC house current. Insert the power cord into a 120 Volts/60Hz outlet.

NEVER CONNECT THE PDP TV TO OTHER THAN THE SPECIFIED VOLTAGE NOR TO DIRECT CURRENT NOR TO 50HZ. TO PREVENT ELECTRIC SHOCK, DO NOT USE THE PDP TELEVISION’S (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE, OR THE OUTLETS UNLESS THE BLADES AND GROUND TERMINAL CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

CIRCUIT PROTECTION:

CAUTION: Always replace the fuse mains fuse with one of the same type and rating. See the parts list for details.

SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addendum, read and follow the information in previous pages number 2 and 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on the previous pages of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
    a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
    b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.
    c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

> **CAUTION**: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this instrument or any of its assemblies.
3. Unless specified otherwise in these service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%- 99% strength).

> **CAUTION**: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket of voltage interlocks with which instruments covered by this service data might be equipped.
5. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heatsinks are correctly installed.
6. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.
7. Use with this instrument only the test fixtures specified in this service data.

> **CAUTION**: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or desolder ES devices.

4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

> CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 600°F to 800°F.
2. Use an appropriate lead free solder (see page 8). Lead solder can be used, but there is a possibility of failure due to insufficient strength of the solder.
3. Keep the soldering iron tip clean and well-tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following desoldering technique.

a. Allow the soldering iron tip to reach normal temperature (600°F to 800°F).

b. Heat the component lead until the solder melts.

Quickly draw away the melted solder with an antistatic, suction-type solder removal device or with solder braid.

CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique.

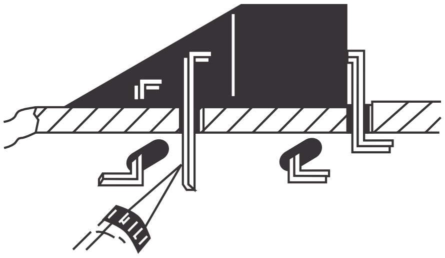
a. Allow the soldering iron tip to reach normal temperature (600°F to 800°F).

b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.

CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use soldering iron to pry the leads.

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of the three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacements

1. Heat and remove all solder from around the transistor leads.
2. Remove the heatsink mounting screw (if so equipped).
3. Carefully remove the transistor from the circuit board.
4. Insert new transistor in circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to the diode body.
2. Bend the two remaining leads perpendicularly to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuses and Conventional Resistor Removal/ Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.
2. Securely crimp leads of replacement component around stake 1/8 inch from top.
3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "liftoff," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

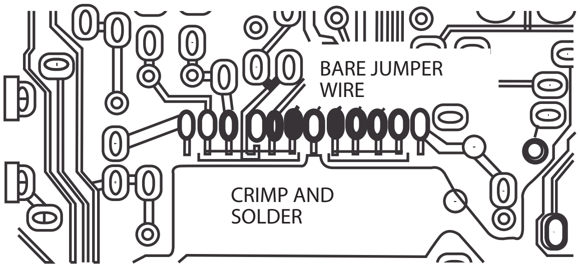
In Critical Copper Pattern Areas

High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)
2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.

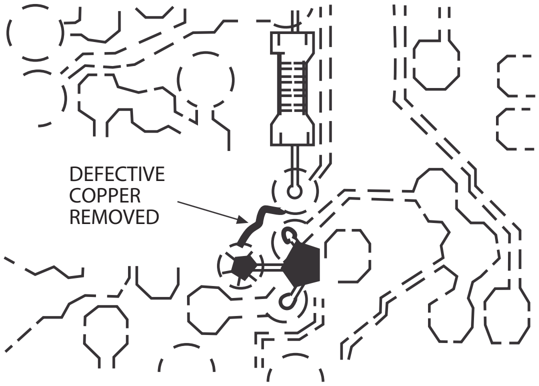


Install jumper wire and solder.

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated jumper wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side.

Carefully crimp and solder the connections.

CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used.

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier.

Example: 162 = 1600 or 1.6KΩ resistor, 0 = 0Ω (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

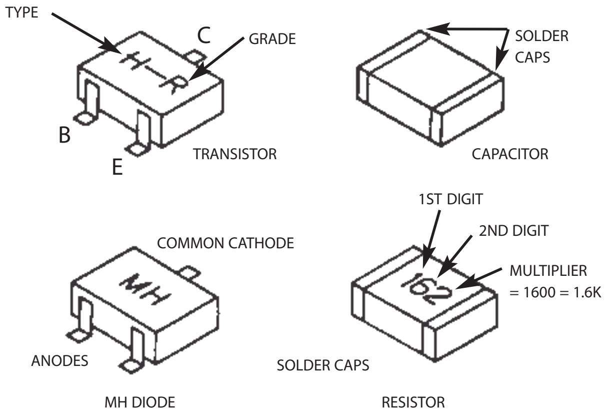
Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal .

Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds

Chip Components

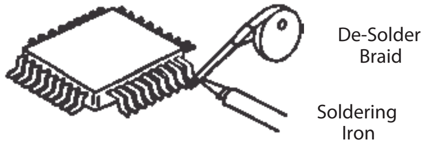

TYPE
C
GRADE
H—R
B
E
TRANSISTOR
SOLDER
CAPS
CAPACITOR
COMMON CATHODE
MH
ANODES
MH DIODE
1ST DIGIT
2ND DIGIT
MULTIPLIER
= 1600 = 1.6K
162
SOLDER CAPS
RESISTOR

How to Replace Flat-IC

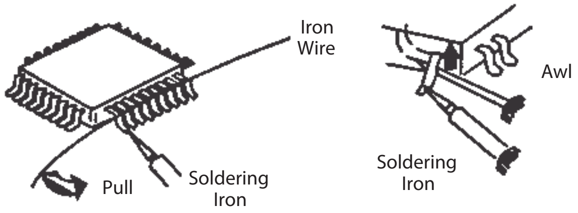
—Required Tools—

- Soldering iron • iron wire or small awl
- De-solder braids • Magnifier

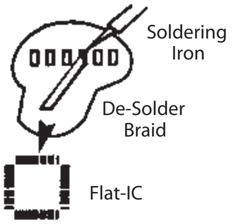
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.


De-Solder
Braid
Soldering
Iron

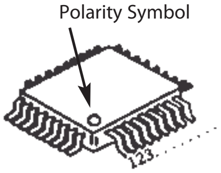
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.


Iron
Wire
Pull
Soldering
Iron
Awl
Soldering
Iron

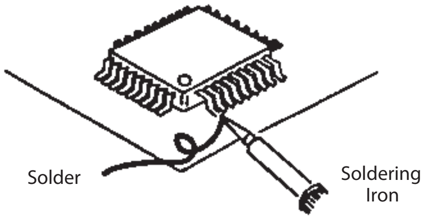
3. Remove the solder from all of the pads of the Flat-IC by using a de-solder braid.


Soldering
Iron
De-Solder
Braid
Flat-IC

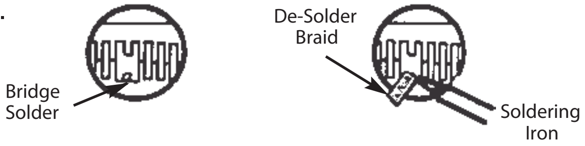
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.


Polarity Symbol
123. . . . . .

5. Solder all pins to the soldering pads using a fine tipped soldering iron.


Solder
Soldering
Iron

6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.


Bridge
Solder
De-Solder
Braid
Soldering
Iron

Information for service about the lead-free solder introduction.
Hitachi introduced lead-free solder to conserve the “Earth Environment”.
Please refer to the following before servicing.

(1) Characteristic of lead-free solder
Melting point of lead free solder is 40-50°C higher than solder containing lead.

(2) Solder for service
Following composition is recommended.
“ Sn - 3.0Ag - 0.5Cu “ , or “ Sn - 0.7 Cu “
Lead solder can be used, but there is a possibility of failure due to insufficient strength of the solder.

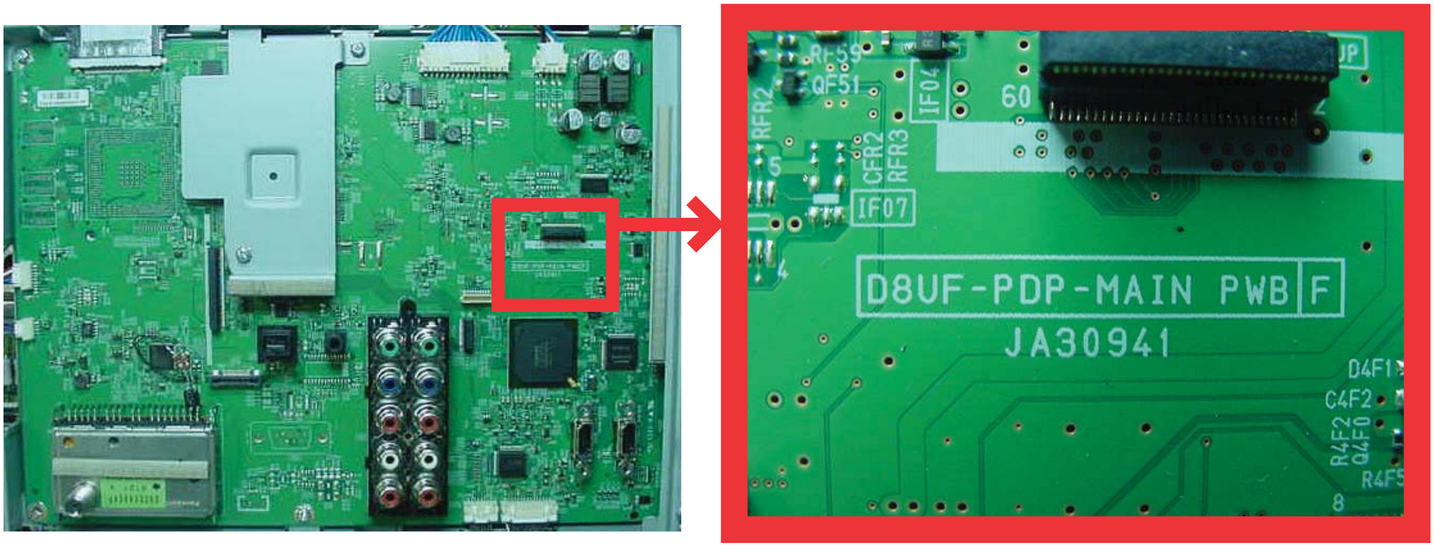
Caution when using solder containing lead.
Please remove previous solder as much as possible from the soldering point.
When soldering, please perfectly melt the lead-free solder to mix well with the previous solder.

(3) Soldering iron for lead-free solder.
Melting point of lead-free solder is higher than solder containing lead.
Use of a soldering tool “with temperature control” and “with much thermal capacitance” is recommended.
(Recommended temperature control : 320°C - 450°C; [608°F - 842°F])

Recommended temperature
PWB with chip parts 320°C +/- 30°C (608°F +/- 86°F)
PWB without chip parts 380°C +/- 30°C (716°F +/- 86°F)
Chassis, metal, shield etc. 420°C +/- 30°C (788 °F +/- 86°F)

(4) Identification of lead-free PWB
2004 models >> lead-free solder is introduced
2006 models >> lead-free solder apply

On lead-free PWB, “F” is added at the beginning of stamp on PWB.



AGENCY REGULATORY INFORMATION

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

FCC Information

This device complies with part15 of the FCC Rules.Operation is subject to the following two conditions : (1) This decide may not cause harmful interference and (2) This decide must accept any interference received, including interference that may cause undesired operation.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi America ,Ltd. Home Electronics Division may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

NOTE

This PDP TV set will display television closed captioning, (or), in accordance with paragraph 15.119 of the FCC rules.

INDUSTRY CANADA AGENCY REGULATORY INFORMATION

Cable Compatible Television Apparatus- Tèlèvision câblocompatible, Canada.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

ACKNOWLEDGMENTS AND TRADEMARKS

↑

Only for P50S602

TABLE OF CONTENTS

INTRODUCTION

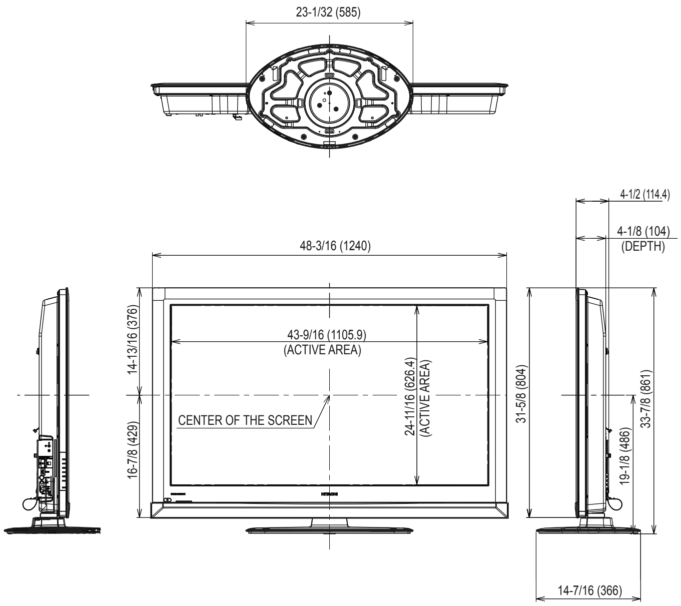
This HITACHI Service Manual is intended for the qualified service personnel and it contains the necessary information for troubleshooting the PDP television set in case of malfunction.

This service manual includes the information for the next models and chassis.

MODEL	CHASSIS
P50S602	D8UF
P50A202	D8UF
P50A402	D8UF

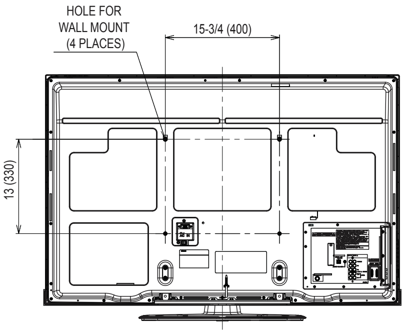
DIMENSIONS:

P50S602:



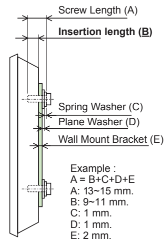
23-1/32 (585)
4-1/2 (114.4)
4-1/8 (104)
(DEPTH)
48-3/16 (1240)
14-13/16 (376)
16-7/8 (429)
43-9/16 (1105.9)
(ACTIVE AREA)
CENTER OF THE SCREEN
24-11/16 (626.4)
(ACTIVE AREA)
31-5/8 (804)
19-1/8 (486)
33-7/8 (861)
14-7/16 (366)

Units : Inches (mm)



HOLE FOR
WALL MOUNT
(4 PLACES)
15-3/4 (400)
13 (330)

Rear View
Use as Reference for Wall Mount Bracket



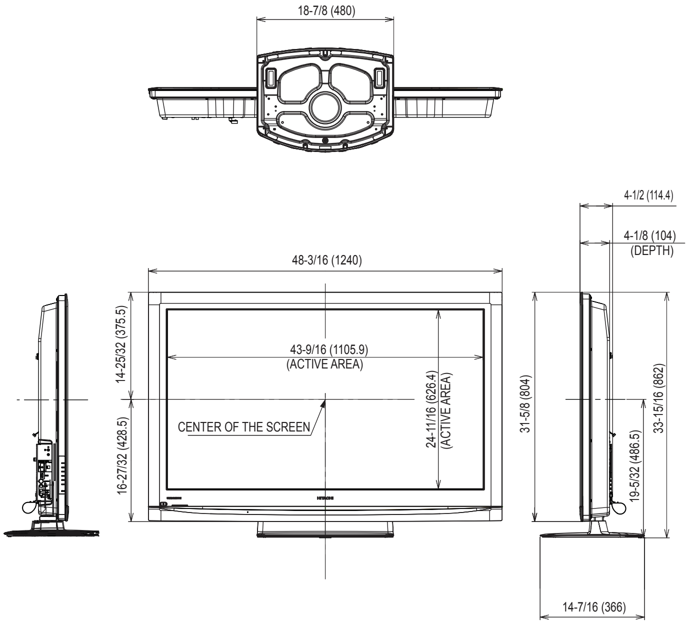
Screw Length (A)
Insertion length (B)
Spring Washer (C)
Plane Washer (D)
Wall Mount Bracket (E)

Example :
A = B+C+D+E
A: 13~15 mm.
B: 9~11 mm.
C: 1 mm.
D: 1 mm.
E: 2 mm.

- The screw type :Thread ISO M6 (Metric type, do not use Standard type).

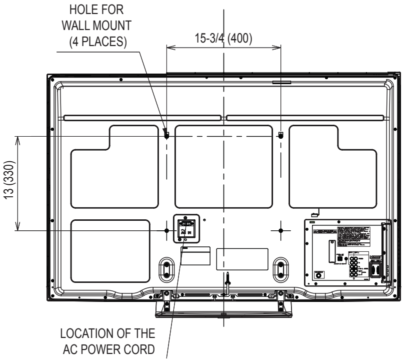
Side View
Wall Mount Screw specification

P50A202
P50A402:



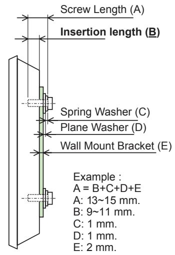
18-7/8 (480)
4-1/2 (114.4)
4-1/8 (104)
(DEPTH)
48-3/16 (1240)
14-25/32 (375.5)
16-27/32 (428.5)
43-9/16 (1105.9)
(ACTIVE AREA)
CENTER OF THE SCREEN
24-11/16 (626.4)
(ACTIVE AREA)
31-5/8 (804)
19-5/32 (486.5)
33-15/16 (862)
14-7/16 (366)

Units : Inches (mm)



HOLE FOR
WALL MOUNT
(4 PLACES)
15-3/4 (400)
13 (330)
LOCATION OF THE
AC POWER CORD

Rear View
Use as Reference for Wall Mount Bracket



Screw Length (A)
Insertion length (B)
Spring Washer (C)
Plane Washer (D)
Wall Mount Bracket (E)

Example :
A = B+C+D+E
A: 13~15 mm.
B: 9~11 mm.
C: 1 mm.
D: 1 mm.
E: 2 mm.

- The screw type :Thread ISO M6 (Metric type, do not use Standard type).

Side View
Wall Mount Screw specification

TABLE OF CONTENTS

POWER RATINGS:

No.	Model Name	Indicated Value			Chassis
		Max Rating		Average Rating(W)	
		(W)	(A)		
1	P50S602	571	4.8	388	D8UF
2	P50A202	480	4.02	288	D8UF
3	P50A402	480	4.02	288	D8UF

TERMINALS AND JACKS

Model number	HDMI input	Component (YPbPr) input	Composite video	S-video	Antenna (RF) input	Optical output	Upgrade card slot	Phono Jack for service
P50S602	3	2	3	1	1	1	1	1
P50A202	3	2	3	1	1	1	1	1
P50A402	3	2	3	1	1	1	1	1

MAIN FEATURES

- New 1080 Full HD Plasma Display Panel (S model only)
- New Energy Saving Settings Options
- New Easy-to-Use On-Screen Menu Control (3 Language)
- Region 5 (Downloadable V-Chip)
- Preprogrammed Remote Control
- Input Signal Identification
- High Definition Multimedia Interface with CEC compatible
- HDMI/HDCP
- TV Guide On Screen™ (Daily) (S model only)
- Dolby®Digital Technology
- Lip Sync Control
- Game Input Mode
- Ambient Light Sensor

SPECIFICATIONS

SPECIFICATION		P50S602	P50A402/P50A202
Panel	Display dimensions	(1105.92 × 626.4) mm	
	Resolution	1920 (H) x 1080p (V) pixels	1280 (H) x 1080i (V) pixels
Ambient conditions	Temperature	Operating: 41ºF to 95ºF, Storage: 5ºF to 140ºF	
	Relative humidity	Operating: 20%RH to 80%RH, Storage: 20%RH to 80%RH (non-condensing)	
Power supply		AC108 - 132V, 60Hz	
Audio output		speaker 10W + 10W	
HDMI input	Input terminals	3 HDMI input terminals	
	Input signals	HDMI: 1080p, 1080i, 720p, 480p, 480i	
RF Antenna input	Analog	NTSC	
	Digital	1080i, 720p, 480p, 480i	
Video inputs	Input 1	(YPbPr) 1080i, 720p, 480p, 480i. (Video) NTSC.	
	Input 2	(YPbPr) 1080i, 720p, 480p, 480i. (Video) NTSC.	
	Input 3	(Video) NTSC.	

QUICK SETUP GUIDE

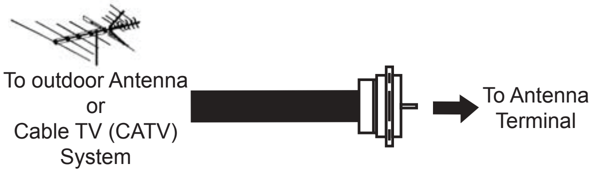
Perform the following steps to quickly setup the new Hitachi Plasma Television Set.

1. ANTENNA CONNECTION

Unless your Plasma Television is connected to a cable TV system or to a centralized antenna system, a good outdoor color TV antenna is recommended for best performance. However, if you are located in an exceptionally good signal area that is free from interference and multiple image ghosts, an indoor antenna may be sufficient.

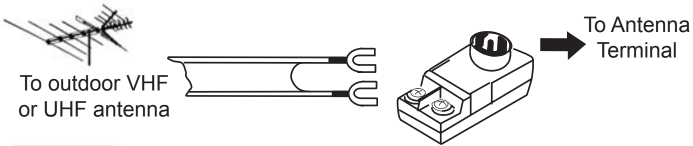
a). VHF (75-Ohm) antenna/CATV (Cable TV)

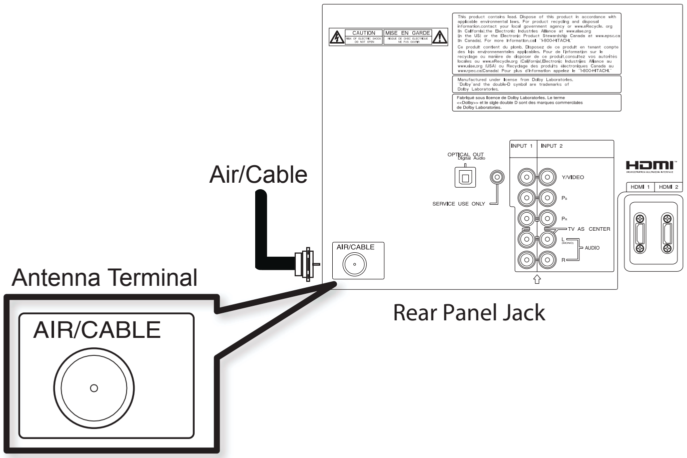
When using a 75-Ohm coaxial cable system, connect CATV coaxial cable to the AIR/CABLE (75-Ohm) terminal. Or if you have an antenna, connect the coaxial cable to the same AIR/CABLE terminal.


To outdoor Antenna
or
Cable TV (CATV)
System
To Antenna
Terminal

b). VHF (300-Ohm) antenna/UHF antenna

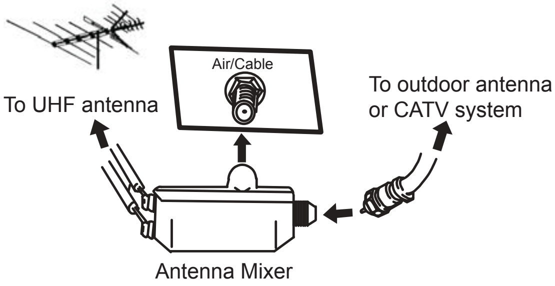
When using a 300-Ohm twin lead from an outdoor antenna, connect the VHF or UHF antenna leads to screws of the VHF or UHF adapter. Plug the adapter into the antenna terminal on the TV.


To outdoor VHF
or UHF antenna
To Antenna
Terminal


Air/Cable
Antenna Terminal
AIR/CABLE
Rear Panel Jack

c). When both VHF and UHF antennas are connected

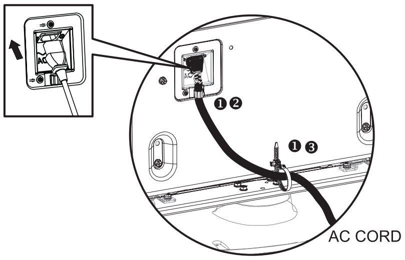
Attach an optional antenna cable mixer to the TV antenna terminal, and connect the cables to the antenna mixer. Consult your dealer or service store for the antenna mixer.


Air/Cable
To UHF antenna
To outdoor antenna
or CATV system
Antenna Mixer

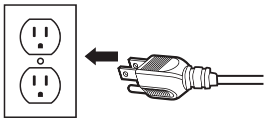
NOTE *Connecting a 300-Ohm twin lead connector may cause interference. Using a 75-Ohm coaxial cable is recommended.*

2. CONNECT YOUR NEW HITACHI PLASMA TV TO THE POWER SOURCE

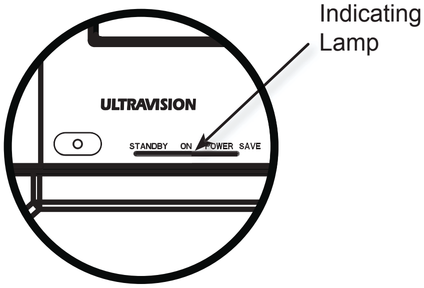
a). Connect the power cord to your TV set and secure it with the cable tie included in the rear cover bottom.


❶❷
❶❸
AC CORD

b). Connect the power cord to the AC Wall outlet .

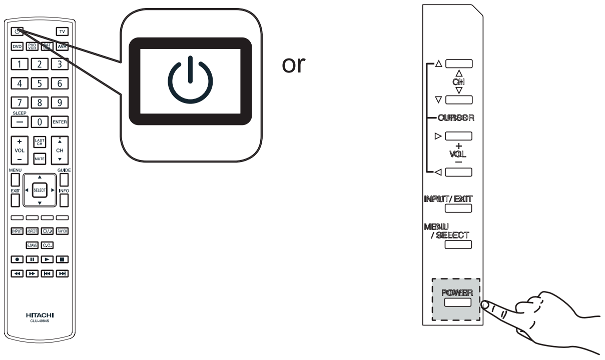


c). The Indicating Lamp will light Red (Standby mode) and then light blue (image displays).


Indicating
Lamp
ULTRAVISION
STANDBY
ON
POWER SAVE

3. POWER ON/OFF YOUR NEW HITACHI PLASMA TV.

Press the POWER button on the Remote Control or the POWER switch on the Side Control Panel for power on/off (Stand-By mode).


or
CH
CURSOR
VOL
INPUT/EXIT
MENU
/SELECT
POWER
HITACHI

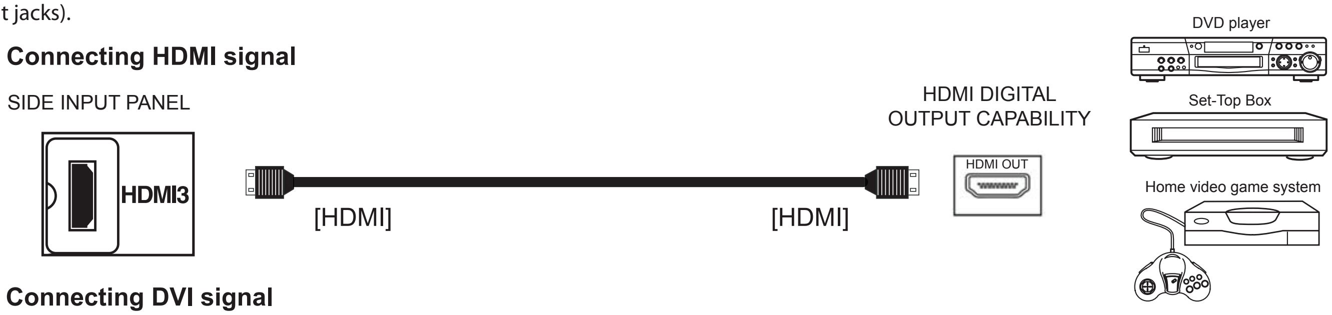
NOTE If the Power Switch is set to OFF, the Power Button on the Remote Control will not operate.

TABLE OF CONTENTS

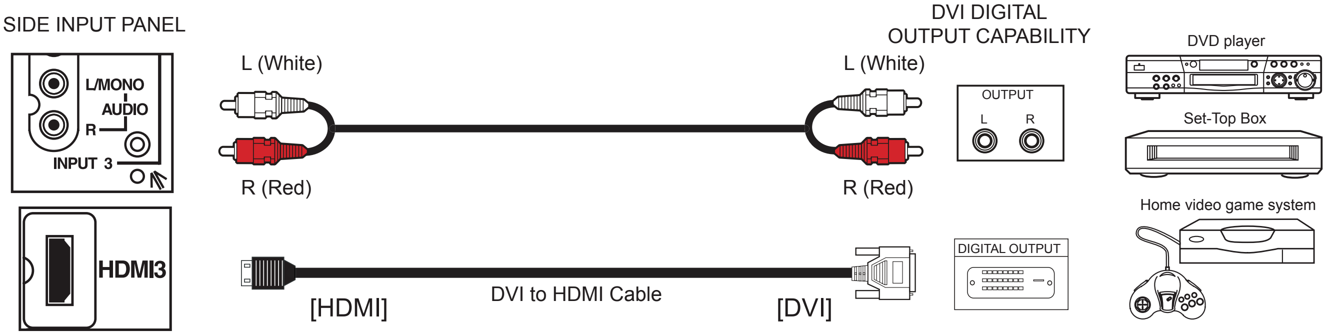
Side Panel Connections

The following connection diagrams are offered as suggestions. However, you may need to modify them to accommodate your particular assortment of components and features. For best performance, video and audio cables should be made from coaxial shielded wire.
The SIDE panel HDMI jack is provided as a convenience to allow you to easily connect HDMI or DVI signals from a DVD, Set-Top-Box, Video Game as shown in the following examples (When connecting DVI signal it will need to connect the audio output into the Side Audio Input jacks).

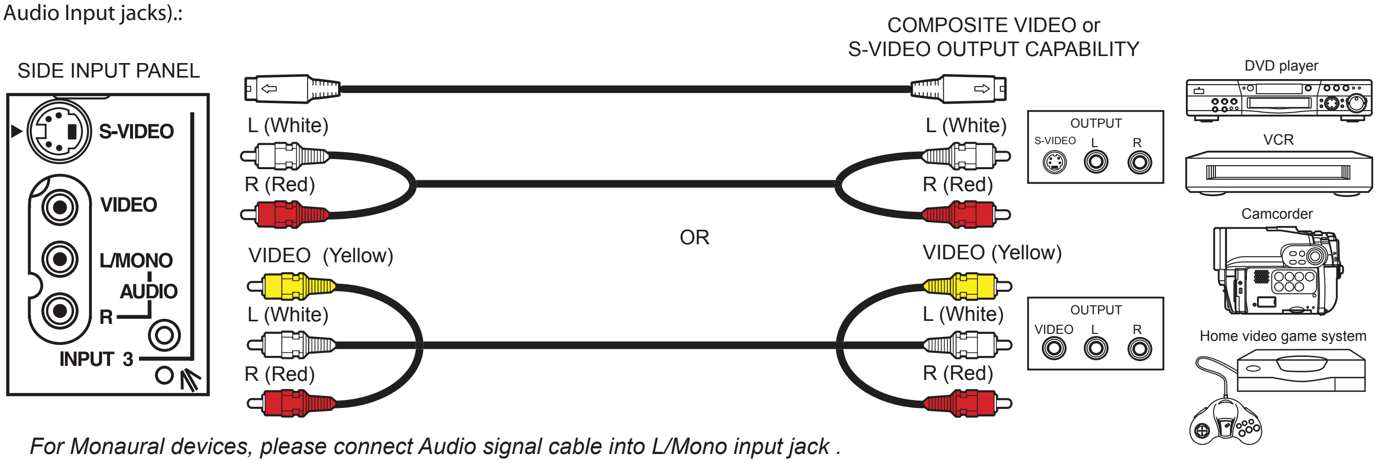
A) Connecting HDMI signal


SIDE INPUT PANEL
HDMI3
[HDMI]
[HDMI]
HDMI DIGITAL OUTPUT CAPABILITY
HDMI OUT
DVD player
Set-Top Box
Home video game system

B) Connecting DVI signal


SIDE INPUT PANEL
L/MONO
AUDIO
R
INPUT 3
HDMI3
L (White)
R (Red)
L (White)
R (Red)
DVI DIGITAL OUTPUT CAPABILITY
OUTPUT
L
R
DIGITAL OUTPUT
[HDMI]
DVI to HDMI Cable
[DVI]
DVD player
Set-Top Box
Home video game system

The SIDE panel VIDEO and S-VIDEO jacks are provided as a convenience to allow you to easily connect a camcorder, DVD, Video Game and a VCR as shown in the following examples. (When connecting S-VIDEO signal it will need to connect the audio output into the Side Audio Input jacks).:


COMPOSITE VIDEO or S-VIDEO OUTPUT CAPABILITY
SIDE INPUT PANEL
S-VIDEO
VIDEO
L/MONO
AUDIO
R
INPUT 3
L (White)
R (Red)
L (White)
R (Red)
OR
VIDEO (Yellow)
L (White)
R (Red)
VIDEO (Yellow)
L (White)
R (Red)
OUTPUT
S-VIDEO
L
R
OUTPUT
VIDEO
L
R
DVD player
VCR
Camcorder
Home video game system

For Monaural devices, please connect Audio signal cable into L/Mono input jack .

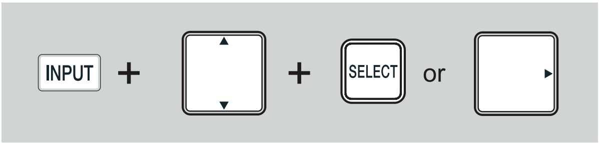
NOTES

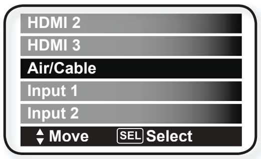
- *Completely insert connection cord plugs when connecting to side panel jacks. If you do not, the played back picture may be abnormal.*
- *Cable plugs are often color-coded. Match colors of plugs and terminals, i.e. connect red to red, white to white, etc.*
- *When making video connections, connect S-Video only or Video only. If both are connected, S-Video takes priority.*

The exact arrangement you use to connect the VCR, camcorder, DVD player, or HDTV Set-Top-Box to your Plasma TV is dependent on the model and features of each component. Check the operating guide of each component for the location of video and audio inputs and outputs.

Before Operating External Video Source

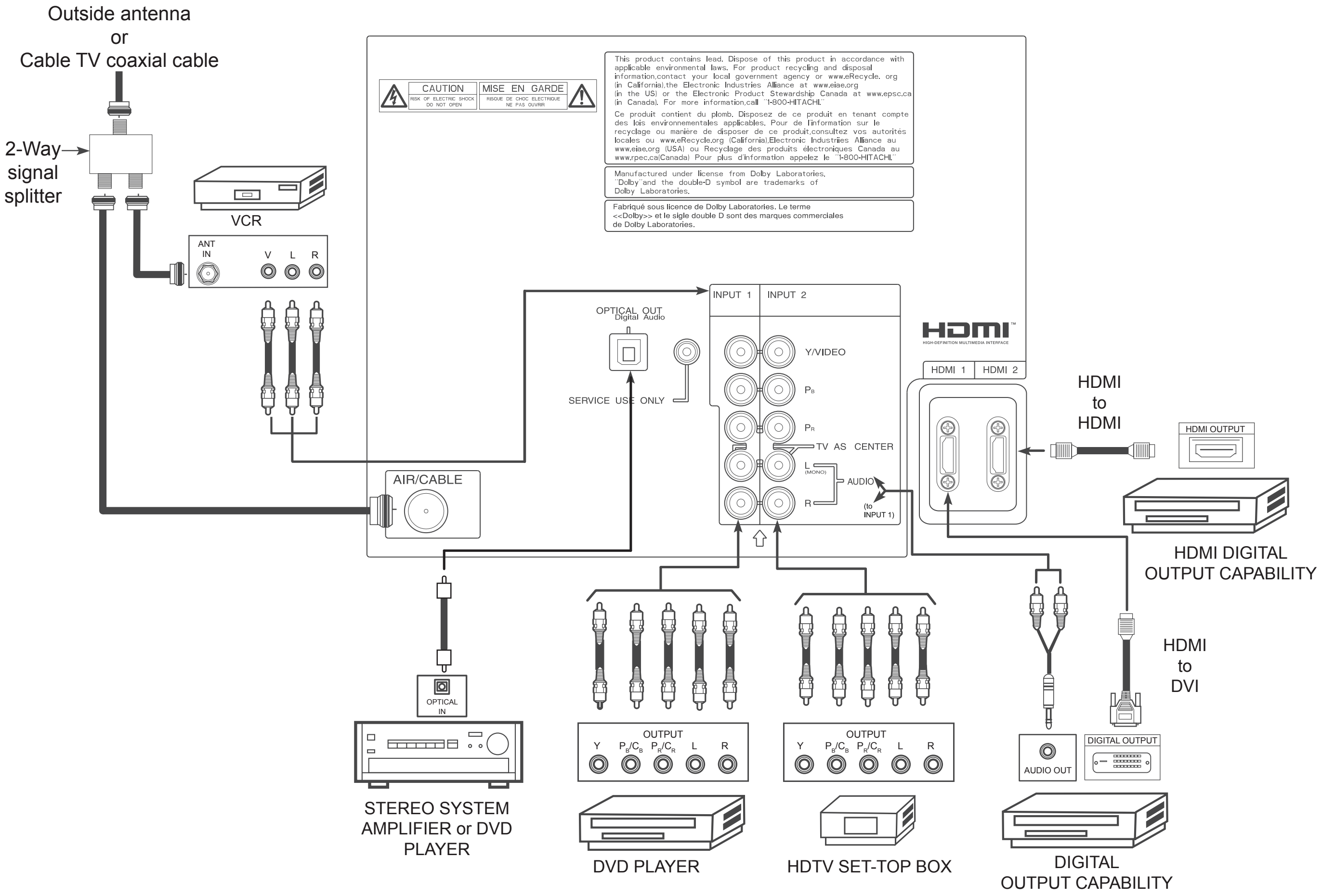
Connect an external source to one of the INPUT terminals, then press the INPUTS button to show the INPUTS menu. Use the CURSORS (▲ and ▼) to select the Input of your choice. Then press the SELECT button or the CURSOR ▶ to confirm your choice (see page 20).


INPUT
+
▲
▼
+
SELECT
or
▶


HDMI 2
HDMI 3
Air/Cable
Input 1
Input 2
Move
SEL Select

Example: Selecting the AIR/Cable (Antenna) Input

REAR PANEL CONNECTIONS


Outside antenna
or
Cable TV coaxial cable
2-Way signal splitter
VCR
ANT IN
V
L
R
CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
MISE EN GARDE
RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR
OPTICAL OUT Digital Audio
SERVICE USE ONLY
AIR/CABLE
INPUT 1
INPUT 2
Y/VIDEO
PB
PR
TV AS CENTER
L (MONO)
AUDIO
R
(to INPUT 1)
HDMI
HDMI 1
HDMI 2
HDMI to HDMI
HDMI OUTPUT
HDMI DIGITAL OUTPUT CAPABILITY
HDMI to DVI
OPTICAL IN
STEREO SYSTEM AMPLIFIER or DVD PLAYER
OUTPUT
Y
PB/CB
PR/CR
L
R
DVD PLAYER
OUTPUT
Y
PB/CB
PR/CR
L
R
HDTV SET-TOP BOX
AUDIO OUT
DIGITAL OUTPUT
DIGITAL OUTPUT CAPABILITY

This product contains lead. Dispose of this product in accordance with applicable environmental laws. For product recycling and disposal information,contact your local government agency or www.eRecycle. org (in California),the Electronic Industries Alliance at www.eiae.org (in the US) or the Electronic Product Stewardship Canada at www.epsc.ca (in Canada). For more information,call ˝1-800-HITACHI.˝

Ce produit contient du plomb. Disposez de ce produit en tenant compte des lois environnementales applicables. Pour de l'information sur le recyclage ou manière de disposer de ce produit,consultez vos autorités locales ou www.eRecycle.org (California),Electronic Industriies Alliance au www.eiae.org (USA) ou Recyclage des produits électroniques Canada au www.rpec.ca(Canada) Pour plus d'information appelez le ˝1-800-HITACHI.˝

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NOTE *Cables are optional, except when specified.*

TIPS ON REAR PANEL CONNECTIONS

- COMPONENT Y-PBPR (Input 1 & 2) or HDMI (1 & 2) connections are provided for high performance DVD players, VCRs etc. that have this feature. Use these connections in place of the standard video connection if your device has this feature.
- If your device has only one audio output (mono sound), connect it to the left audio jack on (L/(MONO)) the Rear Panel.
- Refer to the operating guide of your other electronic equipment for additional information on connecting your hook-up cables.
- Connect only 1 component (VCR, DVD player, camcorder, etc.) to each input jack.
- Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the TV's PB input and the components R-Y output to the TV's PR input.
- Your component outputs may be labeled Y-CBCR. In this case, connect the components CB output to the TV's PB input and the components CR output to the TV's PR input.
- It may be necessary to adjust TINT to obtain optimum picture quality when using the Y-PBPR inputs.
- Input HDMI 1, HDMI 2 or HDMI 3 can accept HDMI signal.
- When using a HDMI input from a Set-Top-Box, it is recommended to use a 1080p, 1080i or 720p input signal.
- When HDMI input a 1080p signal, it is recommended that the length of the cable should be less than 5 meters.

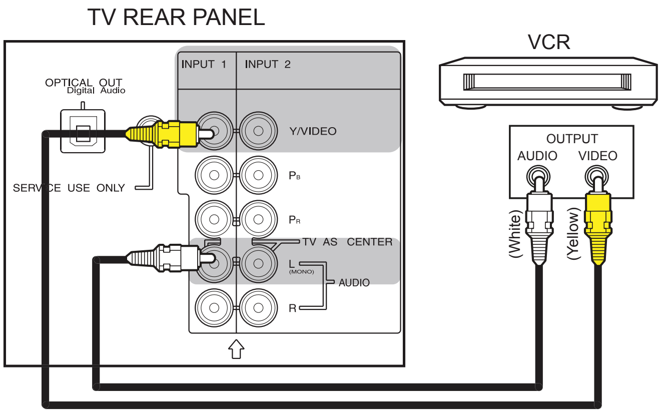
NOTES

- *Completely insert all connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*
- *Cable plugs are often color-coded. Match colors of plugs and terminals, i.e. connect red to red, white to white, etc.*

REAR PANEL CONNECTIONS ... (continued)

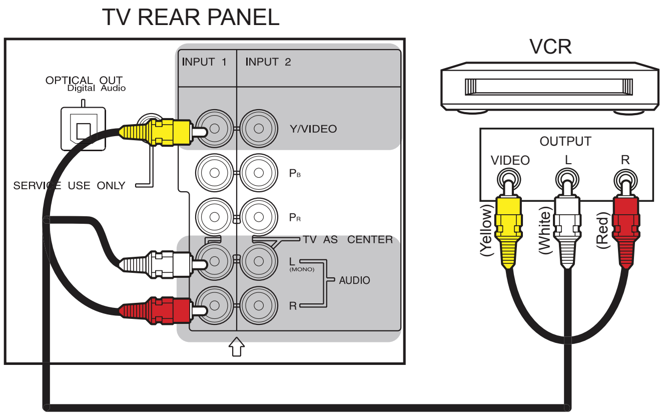
CONNECTING A VIDEO AND MONAURAL AUDIO SOURCE TO INPUT 1 or 2.

1. Connect the VIDEO and AUDIO cable from the VIDEO and AUDIO OUT jack of the VCR to the INPUT 1 or 2 (VIDEO) and (MONO)/L(AUDIO) jack, as shown on the Rear Panel on the right.
2. Press the INPUTS button, then select INPUT 1 or 2 from the INPUTS menu to view the program from the VCR.


TV REAR PANEL
VCR
INPUT 1
INPUT 2
OPTICAL OUT
Digital Audio
SERVICE USE ONLY
Y/VIDEO
PB
PR
TV AS CENTER
L
(MONO)
AUDIO
R
OUTPUT
AUDIO
VIDEO
(White)
(Yellow)

CONNECTING A VIDEO AND STEREO AUDIO SOURCE TO INPUT 1 or 2

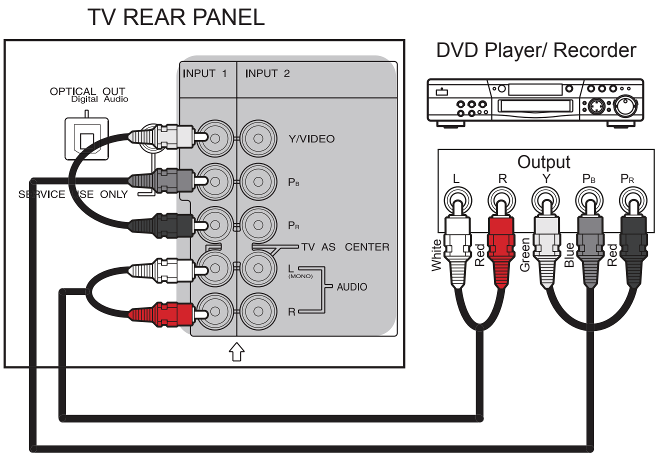
1. Connect the VIDEO and AUDIO cables from the VIDEO OUT and AUDIO OUT jacks of the VCR to the INPUT 1 or 2 (VIDEO) jacks. A VCR connection to Rear Panel Input 1 example is shown on the right.
2. Press the INPUTS button, then select INPUT 1 or 2 from the INPUTS menu to view the program from the VCR.


TV REAR PANEL
VCR
INPUT 1
INPUT 2
OPTICAL OUT
Digital Audio
SERVICE USE ONLY
Y/VIDEO
PB
PR
TV AS CENTER
L
(MONO)
AUDIO
R
OUTPUT
VIDEO
L
R
(Yellow)
(White)
(Red)

NOTE *When INPUT 1 or 2 are used, it Is necessary to connect the composite video output of the device to the Y/VIDEO input jack of the TV.*

CONNECTING A COMPONENT AND STEREO AUDIO SOURCE TO INPUT 1 or 2: YPBPR.

1. Connect the Y, PB/CB, PR/CR and AUDIO cables from the Y, PB/CB, PR/CR OUT and AUDIO OUT jacks of the DVD PLAYER or HDTV Set-Top-Box to the INPUT 1 or 2 YPBPR and AUDIO jacks. A DVD connection to Rear Panel Input 2 example is shown on the right.
2. Press the INPUTS button, then select INPUT 1 or 2 from the INPUTS menu to view the program from the DVD player or HDTV Set-Top Box.


TV REAR PANEL
DVD Player/ Recorder
INPUT 1
INPUT 2
OPTICAL OUT
Digital Audio
SERVICE USE ONLY
Y/VIDEO
PB
PR
TV AS CENTER
L
(MONO)
AUDIO
R
Output
L
R
Y
PB
PR
White
Red
Green
Blue
Red

NOTES

- *Completely insert the connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*
- *Cable plugs are often color-coded. Match colors of plugs and terminals, i.e. connect red to red, white to white, etc.*
- *To return to the last channel viewed, select CABLE or AIR from the INPUTS menu.*

REAR PANEL CONNECTIONS ... (finished)

CONNECTING AN EQUIPMENT SOURCE WITH HDMI OR DVI CAPABILITY TO HDMI 1, HDMI 2

1. Connect the HDMI or DVI to HDMI connection cable from the output of the HDTV set top box or DVD player to the HDMI input as shown on the Rear panel below.

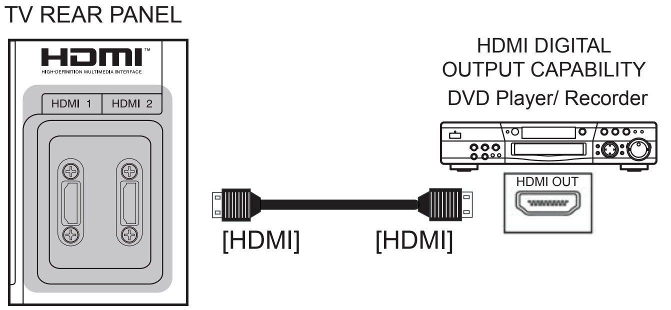
2. With DVI output, connect the audio cables from the AUDIO OUT jack of the HDTV set top box or DVD player to the Rear Panel INPUT 1 or 2 AUDIO jacks as shown on the right.

3. Press the INPUTS button, then select HDMI 1 or 2 to view the program from the HDTV SET-TOP BOX or DVD player.

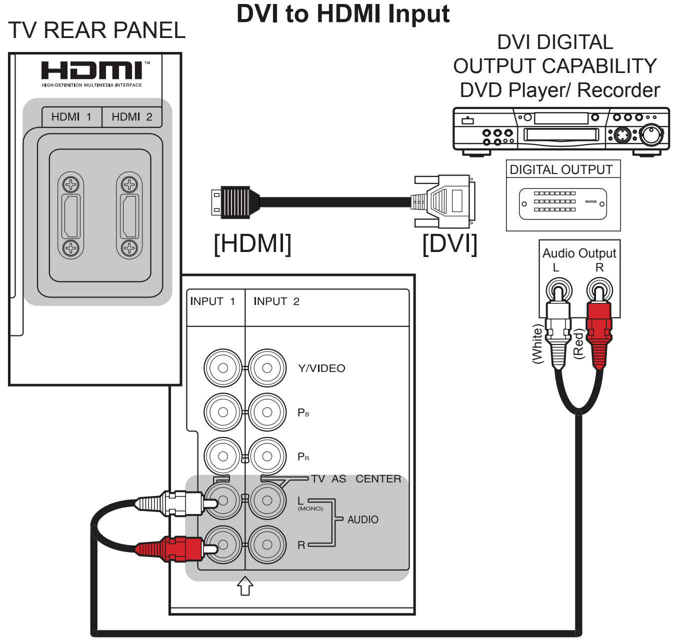
NOTES

- *Completely insert the connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*
- *When using a DVI to HDMI cable, connect the Audio Out L and R cables at the same input (1, 2) as your HDMI input (1, 2).*
- *The HDMI input on HDMI 1, 2 and 3 contains the copy protection system called High-bandwidth Digital Content Protection (HDCP). HDCP is a cryptographic system that encrypts video signals when using HDMI connections to prevent illegal copying of video contents.*
- *HDMI is not a "NETWORK" technology. It establishes a one-way point-to-point connection for delivery of uncompressed video to a display.*
- *The connected digital output device controls the HDMI interface so proper set-up of device user settings determines final video appearance.*

HDMI Input


TV REAR PANEL
HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE
HDMI 1
HDMI 2
HDMI DIGITAL OUTPUT CAPABILITY
DVD Player/ Recorder
HDMI OUT
[HDMI]
[HDMI]

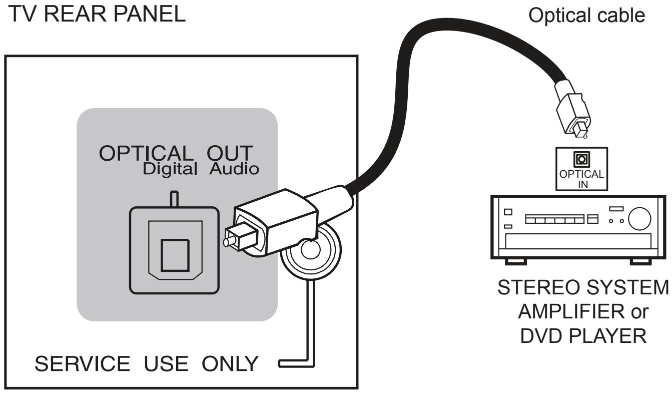
DVI to HDMI Input


TV REAR PANEL
HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE
HDMI 1
HDMI 2
DVI DIGITAL OUTPUT CAPABILITY
DVD Player/ Recorder
DIGITAL OUTPUT
[HDMI]
[DVI]
Audio Output
L
R
(White)
(Red)
INPUT 1
INPUT 2
Y/VIDEO
PB
PR
TV AS CENTER
L (MONO)
AUDIO
R

CONNECTING AN EXTERNAL AUDIO AMPLIFIER

To monitor the audio level of the Plasma TV to an external audio amplifier, connect the system as shown on the right. The "OPTICAL OUT" from the Rear Panel is a fixed output. The Volume of the amplifier is controlled by the amplifier, not by the Plasma Television.
The OPTICAL OUT terminal outputs only digital audio sources such as HDMI or digital program channels.

1. Connect an optical cable from the Optical out to the Optical input of a separate Stereo System Amplifier as shown on the Rear Panel on the right.


TV REAR PANEL
Optical cable
OPTICAL OUT
Digital Audio
SERVICE USE ONLY
OPTICAL IN
STEREO SYSTEM AMPLIFIER or DVD PLAYER

NOTES

- *Completely insert the connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*
- *Cable plugs are often color-coded. Match colors of plugs and terminals, i.e. connect red to red, white to white, etc.*
- *To return to the last channel viewed, select CABLE or AIR from the INPUTS menu.*

TABLE OF CONTENTS OF ADJUSTMENTS

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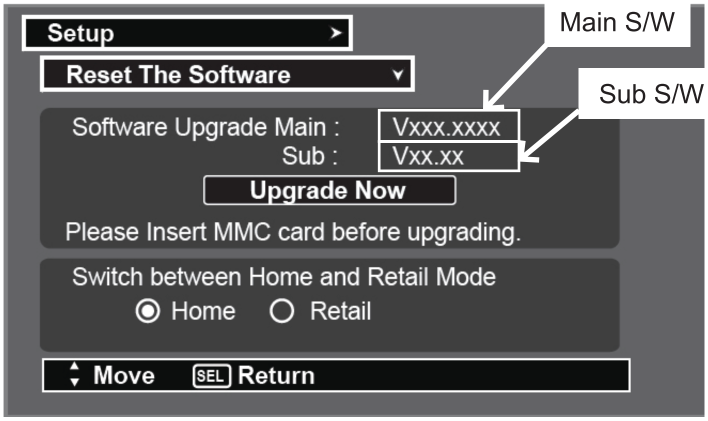
1. ADJUSTMENT PROCEDURE START-UP

The PDP TV sets run through a series of adjustments during the assembly process.
Also, after servicing, these same adjustments must be done. The adjustments are all made through the Service Mode Menu.

NOTE: - S/W Check and upgrade -
The software version of the TV set can be checked through the user OSD by following the next menu path:
[MENU] -> Setup -> Reset the Software>
The next picture shows the OSD where the version is shown.



Software Upgrade Main : Vxxx.xxxx
Sub : Vxx.xx

Please Insert MMC card before upgrading.

Switch between Home and Retail Mode
● Home ○ Retail

Till this day the latest software versions are:

Model	Main S/W	Sub S/W
P50S602	V0103.0001	V04.17
P50A402	V0105.0001	V04.17
P50A202	V0105.0001	V04.17

Software versions are subject to change for improvement. Contact 1-800 Hitachi, or www.hitachiserviceusa.com For the latest version of software.

The software upgrade is done by inserting an SD/MMC card with the software files thru the side panel slot. After inserting the card press the “Upgrade Now” OSD button in the above shown OSD screen and wait for the upgrade process to finish. After, press the side panel power button off, remove the SD/MMC card, and press the power button on.

NOTE: Any power interruption during the upgrade process will cancel the upgrade. When this happens, repeat the upgrade process.

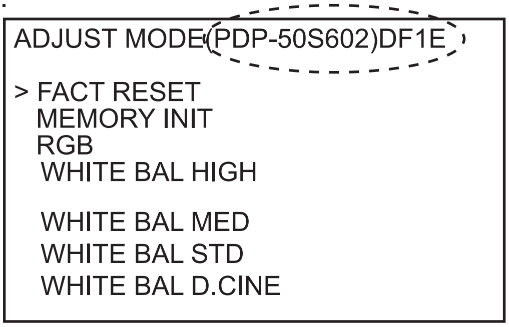
1.1 How to get to the Service Mode Menu

The Service Mode Menu can be reached by following the next sequence:

1. Turn the PDP TV set to power-On and with the remote control push MENU -> MENU -> 8 -> SELECT.

2. To exit the Service Mode press [EXIT] key of the remote control or the PDP side control panel.

The next picture shows the Service Mode OSD for the PDP TV set.



ADJUST MODE(PDP-50S602)DF1E

> FACT RESET
MEMORY INIT
RGB
WHITE BAL HIGH

WHITE BAL MED
WHITE BAL STD
WHITE BAL D.CINE

In the first line of the Adjustment mode OSD, the model number and the board information number are shown.

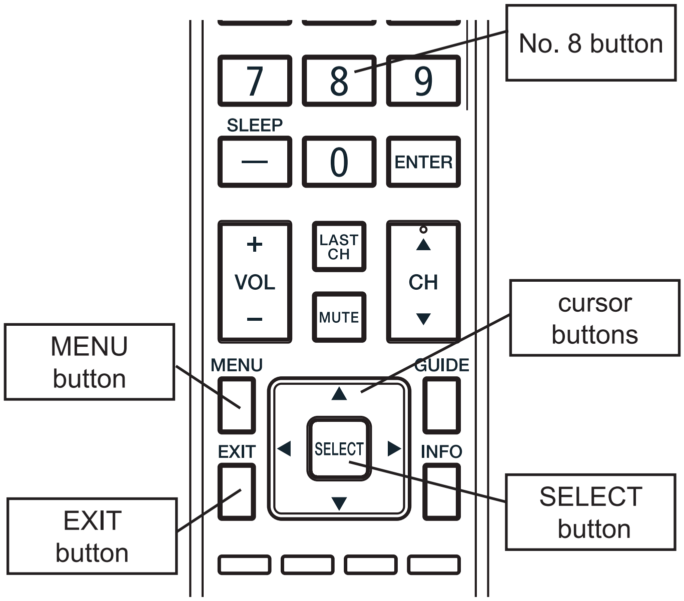
Model	Board Information
P50S602	DF1E
P50A402	DF1E
P50A202	DF3E

1.2 Changing data and selecting adjustment codes.

When the PDP TV is in the Service Mode, use the remote control cursor keys ◄, ►, ▲, ▼ to make the adjustments. The side control panel in the PDP TV set can also be used for making the adjustments.

A. Use the Remote Control:
The ▲, ▼, keys are used for scrolling thru the adjustment item (in the same page).
The Select key is used for entering to the adjustment item sub-menu.
The ◄, ► keys are used for changing the data values.
Use the MENU remote control button to scroll thru the diferent service mode pages.
The “OK” button is equal to “Enter” key.

The next picture shows part of the R/C indicating the buttons mentioned in the previous explanation.



B. Use the Control Panel (located at the side):

Menu/Select button is for calling the OSD menu or for selecting such menu or any other OSD option.

Input/Exit button is for changing the displayed input or, when some OSD is beeing displayed, to be able to exit the highlighted option.

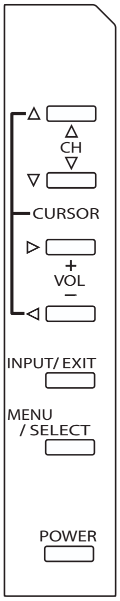
◄ **Vol** button is for reducing the audio volume or equivalent to the Left cursor key when an adjustment value is highlighted.

► **Vol** button is for increasing the audio volume or equivalent to the Right cursor key when an adjustment value is highlighted.

▲ button is same as the R/C Up cursor button.

▼ button is same as the R/C Down cursor button.

The next figures show the side control panel.



2. MEMORY INITIALIZE

The memory initialize operation is to clear the contents of the data memory and to set all adjustment values to initial default.

CAREFUL: The data that will be lost is shown in the section no. “4 Memory initialize affected adjustments”.

2.1 MEMORY INITIALIZE procedure:

(1) Enter Service Mode by the procedure in section 1.1.
(2) Select the second row of the Adjustment mode which is “MEMORY INITIALIZE”, by pressing the down cursor button once.
(3) Push the right cursor key for more than 3 seconds.
NOTE: Until the Memory Initialize operation finishes, do not unplug the AC cord or neither press the side panel Power button switch.
(4) The Memory initialize procedure is started by changing the screen color to cyan and it finishes correctly if it turns to green color. If it turns to RED color it means an error ocurred during the memory initialize process.
(5) Once the memory initialize operation is finished,
Turn off unit with side power switch and
unplug AC cord to reset the digital Circuitry.
(6) Plug the AC cord again and turn on the TV set. All settings and data are updated.

3. FACTORY RESET:

The Factory Reset function is to change all the TV user adjustments to their default factory shipping conditions.

It is recommended to execute this procedure after all the servicing adjustments are finished and before returning the TV set to the owner.

3.1 FACTORY RESET procedure:

(1) Enter Service Mode by the procedure in section 1.1.
(2) The first row of the service mode menu will be selected, this is the FACTORY RESET option.
(3) Press the right cursor key (►) for more than 3 seconds.
NOTE: Until the factory reset operation finishes, do not unplug the AC cord or neither press the side panel Power button switch.
(4) The Factory reset procedure is started by changing the screen color to magenta and it finishes correctly if it turns to green color. If it turns to red color it means an error ocurred during the factory reset process.
(5) Once the Factory reset operation is finished,
Turn off unit with side power switch and
unplug AC cord to reset the digital Circuitry.
(6) Plug the AC cord in again and push the POWER button to turn on the TV set. All settings and data are updated.

Confirm the settings are in factory shipping conditions (refer to section 5.1 of this manual).

4. Memory initialize, Factory Reset and Protection data initialization affected adjustments:

The next table shows the adjustment items which are affected by the Memory Initialize, Factory reset operations.

Adjustment	Memory INIT	Factory Reset
White balance	Not Reset	Not reset
Sub-Contrast	Not Reset	Not reset
Clamp offset	Not Reset	Not reset
Keyed Clamp Control	Not Reset	Not Reset
Light Sensor Gain	Not Reset	Not Reset
Picture Quality data	Reset	Not Reset
Other data	Reset	Not Reset
Video Menu	Reset	Reset
Other factory data	Reset	Reset

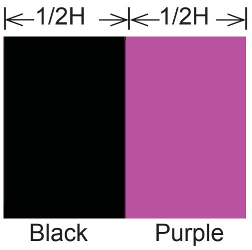
5. VIDEO ADJUSTMENT

The next adjustments are related with the picture quality. Special care must be put.

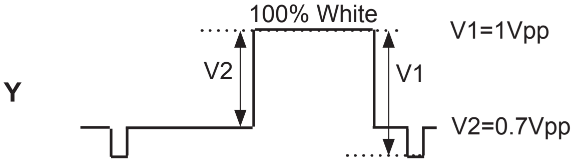
5.1 Sub-Contrast adjustment

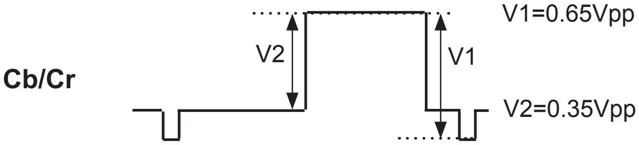
Adjustment preparations

(1) Turn on the PDP TV set, and allow at least 2 minutes heat-run before beginning the adjustment.
(2) Call the user OSD menu and select Video-> Picture Mode -> Day(Dynamic) -> Reset.
(3) Receive the following signal either into Input3 or Input4 (component) input.



Format : 525(480p)





Adjustment procedures

- 525p Sub-Contrast, Y/Cb/Cr clamp offset adjustment -
(1) Receive the signal described above. 525(480)p.
(2) Enter the Adjustment menu and scroll down two steps to reach the RGB item.
(3) Push the right cursor key for more than 3 seconds. The automatic adjustment will start. The OSD will disappear briefly and reappear once the adjustment is finished.

5.2 Video color temperature adjustment (HIGH)

Adjustment Preparations

(1) Turn on the PDP TV set and allow a 20 minutes heat-run before starting the adjustment.
(2) Use an HDMI video signal generator with white raster at Ratio = 100%.
(3) The signal's specification is:

HDMI signal 1080i.

Video level:	0.7Vp-p
Sync:	0.3Vp-p
Set-up level:	0V

(4) Input the white raster signal into the HDMI input terminal.
(5) Confirm all user adjustments are at factory shipment setting (execute factory settings operation).
(6) Set the user video control "Picture Mode" to Dynamic mode.
(7) Set the aspect to 4:3 Expanded.

Adjustment Procedure

(1) Set the CRT color analyzer (Minolta CA-100) at the center of the panel.
(2) Enter in to the Adjustment Mode and select the WHITE BAL HIGH option.
(3) Enter the white balance adjustment by pressing right cursor key.
(4) Make sure at least one of the adjustment parameters is set to FF (hexadecimal value).
(5) After receiving the white raster signal decrease the value of one or two of the R/G/B adjustment parameters.
R - affects the x coordinate.
G - affects the y coordinate.
B - affects both coordinates inversely.

The specification of Video Color Temperature HIGH is:

$$x = 0.273 \pm 0.01$$

$$y = 0.273 \pm 0.01$$

(Color temp: 12000K - 7MPCD)

Remember, at least one of the parameter should remain in FF value.

Remarks:
(a) The color temperature should be adjusted under the condition in which the screen is the brightest, thus the initial value for the adjustment is set to the highest value.
(b) The adjustment is made by reducing brightness only.

5.3 Video color temperature adjustment (MEDIUM)

NOTE: This adjustment is not necessary since its values are set by offset from the Standard color temperature mode. Skip to the next Color Temperature Adjustment (STD).

The specification of Video Color Temperature MEDIUM is:

x = 0.285 ± 0.01

y = 0.293 ± 0.01

(Color temp: 9300K)

5.4 Video color temperature adjustment (STD)

Adjustment Preparation

Same as “Video color temperature adjustment (HIGH)”.

Adjustment Procedure

(1) Set the CRT color analyzer (Minolta CA-100) at the center of the panel.
(2) Enter to the Adjustment Mode and select the WHITE BAL STANDARD option.
(3) Enter the white balance adjustment by pressing right cursor key.
(4) Make sure at least one of the adjustment parameters is set to FF (hexadecimal value).
(5) After receiving the white raster signal decrease the value of one or two of the R/G/B adjustment parameters.
R - affects the x coordinate.
G - affects the y coordinate.
B - affects both coordinates inversely.

The specification of Video Color Temperature STANDARD is:

x = 0.313 ± 0.01

y = 0.329 ± 0.01

(Color temp: 6500K + 6.5MPCD)

Remember, at least one of the parameter should remain in FF value.

Remarks:
Same as “Video color temperature adjustment (HIGH)”.

5.5 Video color temperature adjustment (D. Cinema)

NOTE: This adjustment is not necessary since its values are set by offset from the Medium color temperature mode.

The specification of Video Color Temperature D. Cinema is:

x = 0.314 ± 0.01

y = 0.351 ± 0.01

(Color temp.: 6300K + 27MPCD)

NOTE: Only the P50S602 include this D. Cinema mode. Neither of the A models include this mode.

6 Factory shipping conditions:

Function			Initial data		Condition
			P50S602	P50A402 P50A202	
Input Mode			Air		
Channel			03/03-1 ch		
Favorite Channels			Not registered		
Master Volume			20 Steps		
Video	Picture Mode		Dynamic		Retail
			Day		Home
	Home				
		Contrast (White Level)	100%	100%	
		Brightness (Black Level)	50%	50%	
		Color	50%	50%	
		Tint	CENTER	CENTER	
		Sharpness	50%	50%	
		Color Temperature	High	High	
		Light Sensor	On	On	
		Black Enhancement	Low	Low	
		Contrast Mode	Normal	Normal	
		Noise Reduction	Low	Low	
		MPEG-NR	Off	Off	
		Auto Movie Mode	Off	Off	ANT
			On	On	Input
		Color Space	Vibrant	Vibrant	
	Retail				
		Contrast (White Level)	100%	100%	
		Brightness (Black Level)	48%	48%	
		Color	59%	59%	
		Tint	CENTER	CENTER	
		Sharpness	50%	50%	
		Color Temperature	High	High	
		Light Sensor	Off	Off	
		Black Enhancement	Middle	Middle	
		Contrast Mode	Dynamic	Dynamic	
		Noise Reduction	Low	Low	
		Cross Color NR	On	On	
		MPEG-NR	Off	Off	
		Auto Movie Mode	Off	Off	ANT
			On	On	Input
		Color Space	Vibrant	Vibrant	
	Cinema48		Off	-	
	Lip Sync		0	0	
	Aspect				
		Auto Aspect	Off	Off	
		Mode	4:3 Expanded		4:3
			16:9 Standard 1		16:9
		Vertical Position	0	0	
	Black Side Panel		Off	Off	

6 ... factory shipping conditions continued.

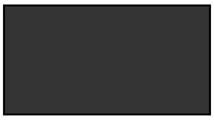
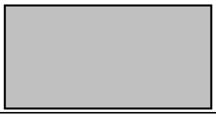
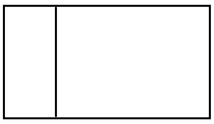
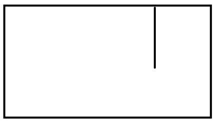
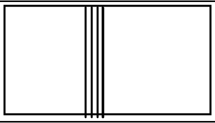
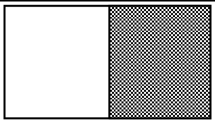
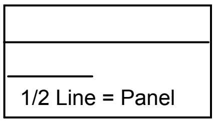
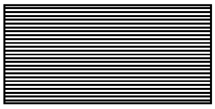
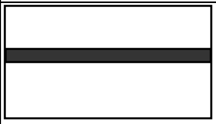
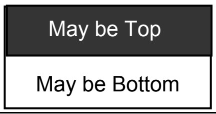
Function				Initial data		Condition
				P50S602	P50A402 P50A202	
Audio	Treble			73%	73%	
	Bass			63%	63%	
	Balance			CENTER	CENTER	
	Surround			Off	Off	
	Bass Boost			On	On	
	Audio Source			Stereo	Stereo	Analog Broadcast
	Perfect Volume			Off	Off	
	Loudness			Off	Off	
	Language			1 [Unknown]	1 [Unknown]	DTV
	Digital Output			Dolby Digital	Dolby Digital	DTV
	DRC			On	On	DTV
Channel Manager	Auto Channel Scan	Source		Air	Air	
	Channel List	FAV		Not Set	Not Set	
		CH#		Air/Cable:2-13CH	Air/Cable:2-13CH	
		Skip		No	No	
		Lock		Off	Off	
		ID		-	-	
Locks	Change Access Code			-	-	
	Engage Lock	Set Channel Lock		All Unlock	All Unlock	
		Set Front Panel Lock		Unlock	Unlock	
	Movie Ratings			All Unlock	All Unlock	
	TV Ratings			All Unlock	All Unlock	
	Canadian Ratings (Eng.)			All Unlock	All Unlock	
	Canadian Ratings (Frn.)			All Unlock	All Unlock	
	Region 5			-	-	
Timers	Set the Clock	Time Zone		PST	PST	
		Date		Jan 01 2008	Jan 01 2008	
		Time		--:-- AM (Not set)		
		Automatically Adjust Clock for Daylight Savings Changes.		off	off	
	Set Sleep Timer			0:00 (off)		
	Set Day/Night Timer	Day Mode On		Off/AM 6:00		
		Dynamic Mode On		Off/PM12:00		
		Night Mode On		Off/PM 6:00		
	Set Event Timer	Event 1(2/3/4)		Not set		
			Start Time	--:-- AM (Not set)		
			End Time	--:-- AM (Not set)		
			Repeat	Jan 01 2008 (Once)		
			CH#	-		

6 ... factory shipping conditions continued.

Function				Initial data		Condition
				P50S602	P50A402 P50A202	
Setup	Set the Menu Options					
		Set the Language		English	English	
		Set the OSD Contrast		MAX	MAX	
	Set The Screen Saver					
		Picture Orbiting		Option 1	Option 1	
	Set The Energy Options					
		Picture Energy Saving		Min	Min	Retail
				Min	Min	Home
		Auto Sync. Saving		Yes	Yes	
		Auto TV Off		No	No	
	Set The Inputs					
		Input 1 Rename		None	None	
		Input 2 Rename		None	None	
		Input 2 Auto Link (Auto/Off)		Off	Off	
		Input 3 Rename		None	None	
		HDMI1 Rename		None	None	
		HDMI2 Rename		None	None	
		HDMI3 Rename		None	None	
	Set Closed Caption					
		Caption Display		Auto	Auto	
		Analog	Mode	Captions	Captions	
			Channel	Channel 1	Channel 1	
		Digital	Language	1 [Unknown]	1 [Unknown]	
			Font	Default	Default	
			Size	Standard	Standard	
			Color	Default	Default	
			Background	Default	Default	
	Set The Power Indicator					
		Power Light Indicator Brightness		Max	Max	
	Set HDMI-CEC Options					
		HDMI-CEC		Off	Off	
	Reset The Software					
		Switch between Home and Retail Mode		Retail	Retail	

TROUBLESHOOTING THE PANEL

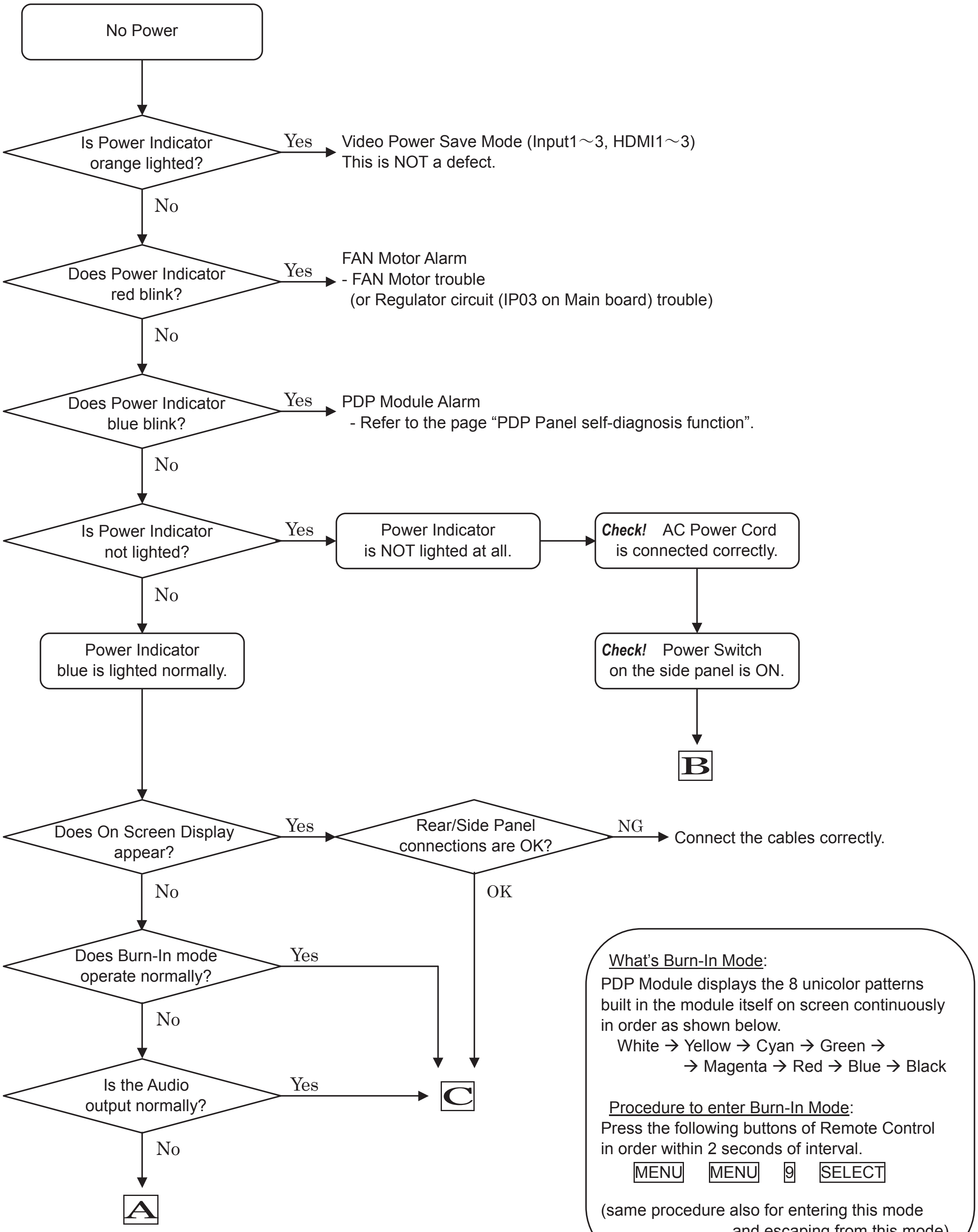
4.5 Fault Symptom

No	Fault contents	Fault status		Suspected fault location	Analysis procedure and measure
1	Entire screen does not light (No Picture)	After momentarily lighting, the screen becomes black immediately or after a few seconds. (Main power is turned off.)		See Troubleshooting Pg. 27	Replace defective PCB See "No Picture" Troubleshooting Flowchart Pg. 27
2		Screen does not show any picture but lights dimly.		LOGIC	Replace LOGIC board
3	Vertical Line	Single vertical line		LOGIC PANEL	See Vertical Line Troubleshooting Flowchart
4		Vertical line from middle of Screen. Vertical line of Different Color			Replace Panel
5	Vertical Bar	Vertical bar with 1/15 or its multiplication width of screen.		ABUS-A/B/C LOGIC And related connection PANEL	See Vertical Line Troubleshooting Flowchart
6		Vertical bar with 1/2 width of screen		ABUS-A/B/C LOGIC And related connection	See Vertical Bar Troubleshooting Flowchart
7	Horizontal Line	Single Horizontal line (Does not light) or Single Horizontal line does not light in entire screen		Make sure connector from SDR to Panel is correctly seated.	Full line, check SDR connector to Panel. Any line short of full Exchange Panel
8		Every other lines do not light in entire screen		X-SUS Y-SUS SDRU and D	Exchange X-SUS or Y-SUS Exchange SDR-U or SDR-D
9	Horizontal Bar	Bar width of 1/8 of vertical size of the screen does not light		Make sure connector from SDR to Panel is correctly seated. SDR-U or D	Exchange SDR board
10		Bar width of 1/2 vertical size of the screen does not light. Could be Top or Bottom.		SDRU or SDRD Y or X-SUS And related connections.	See Horizontal Bar Troubleshooting Flowchart
11	Image sticking (or Image retentions)	Fixed contents are always visible	Text or Graphics of any kind.	In some cases, residual images may remain after the short term display of still images when the picture changes. NORMAL	Lower Contrast & Brightness Set Image Power to MID Perform Screen Wipe
12	Twinkle	The entire screen momentarily becomes brighter or darker.		Loose contact on Connector	Re-Connect cables or replace defective cables
13	Flicker	The entire screen flickers continuously		Loose contact on Connector	
14	Luminance is abnormal	Luminance can not be displayed correctly		LOGIC	Exchange LOGIC
15	Crominance is abnormal	Colors can not be displayed correctly		LOGIC	Exchange LOGIC
16	Sync is disturbed	Syncronization is abnormal		LOGIC	Exchange LOGIC
17	Picture is Distorted	There is an image, but it is not normal.		LOGIC	
18	Some steps of gradation are skipped	Luminance linearity is poor.		LOGIC	Exchange LOGIC
19	Abnormal Noise	Unusual Noise coming from inside the set. Some Panel Noise is Normal		POWER SUPPLY, X or Y-SUS, Cabinet	Find defective part by watching and hearing, after replace defective part.
20	Control of external communication is abnormal.	unable to adjust Contrast, Chrominance and gamma value.		LOGIC	Exchange LOGIC PWB

TROUBLESHOOTING FLOWCHARTS

P50S602 page 1/2

Troubleshooting Flowcharts


No Power
Is Power Indicator orange lighted?
Yes
Video Power Save Mode (Input1～3, HDMI1～3)
This is NOT a defect.
No
Does Power Indicator red blink?
Yes
FAN Motor Alarm
- FAN Motor trouble
(or Regulator circuit (IP03 on Main board) trouble)
No
Does Power Indicator blue blink?
Yes
PDP Module Alarm
- Refer to the page “PDP Panel self-diagnosis function”.
No
Is Power Indicator not lighted?
Yes
Power Indicator is NOT lighted at all.
Check! AC Power Cord is connected correctly.
Check! Power Switch on the side panel is ON.
B
No
Power Indicator blue is lighted normally.
Does On Screen Display appear?
Yes
Rear/Side Panel connections are OK?
NG
Connect the cables correctly.
OK
No
Does Burn-In mode operate normally?
Yes
No
Is the Audio output normally?
Yes
C
No
A

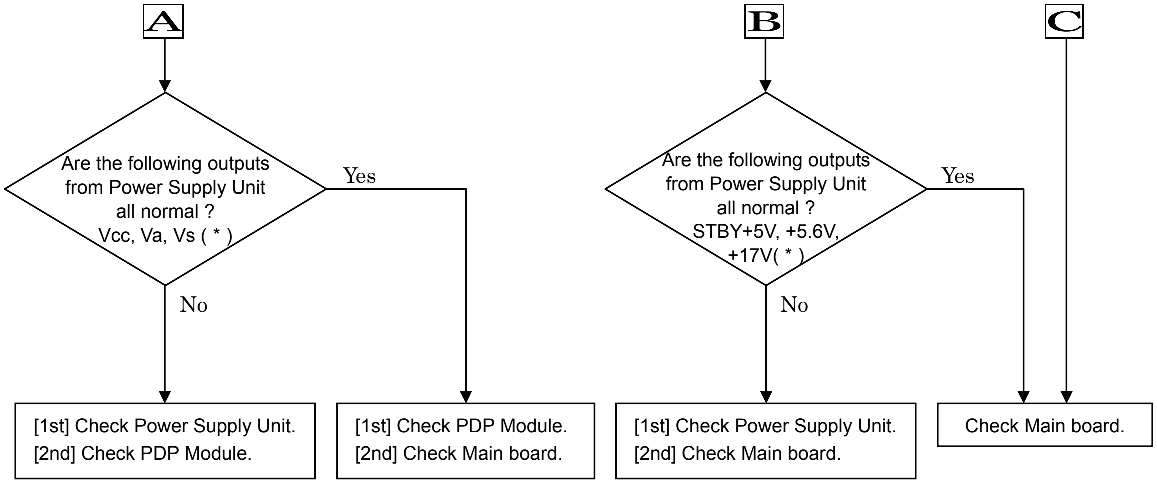
What's Burn-In Mode:
PDP Module displays the 8 unicolor patterns built in the module itself on screen continuously in order as shown below.
White → Yellow → Cyan → Green →
→ Magenta → Red → Blue → Black

Procedure to enter Burn-In Mode:
Press the following buttons of Remote Control in order within 2 seconds of interval.
MENU MENU 9 SELECT

(same procedure also for entering this mode and escaping from this mode)

P50S602 page 2/2

(The following is checking procedure after removing back cover.)


A
Are the following outputs from Power Supply Unit all normal ? Vcc, Va, Vs (*)
Yes
No
[1st] Check Power Supply Unit. [2nd] Check PDP Module.
[1st] Check PDP Module. [2nd] Check Main board.
B
Are the following outputs from Power Supply Unit all normal ? STBY+5V, +5.6V, +17V(*)
Yes
No
[1st] Check Power Supply Unit. [2nd] Check Main board.
C
Check Main board.

*) Connector Pin assignment of Power Supply Unit

[CNPPS]	
1	Audio+17V
2	AudioGND
3	+17V
4	GND
5	+5.6V
6	+5.6V
7	GND
8	GND
9	STBY+5V
10	GND
11	AC CloCK
12	PoWER_1
13	PoWER_2
14	AC oFF
15	N.C.

[CN06]	
1	Vcc+5.1V
2	GND
3	Vra
4	Vrs
5	Vcego
6	Vsago
7	AC oFF

[CN23]	
1	Va
2	Va
3	N.C.
4	Vcc+5.1V
5	GND
6	GND
7	GND
8	N.C.
9	Vs
10	Vs

*) Power-On control signals for Power Supply Unit

(1) AC power : Supplied → PSU outputs STBY+5V.

(2) Power Switch: ON : or Remote Power button : ON → PoWER_1 rises up.

(3) PoWER_1 : High → PSU outputs +5.6V.
and STBY+5V changes from 5.1V to 5.6V.

(4) PoWER_2 : High → PSU outputs +17V and Audio+17V.

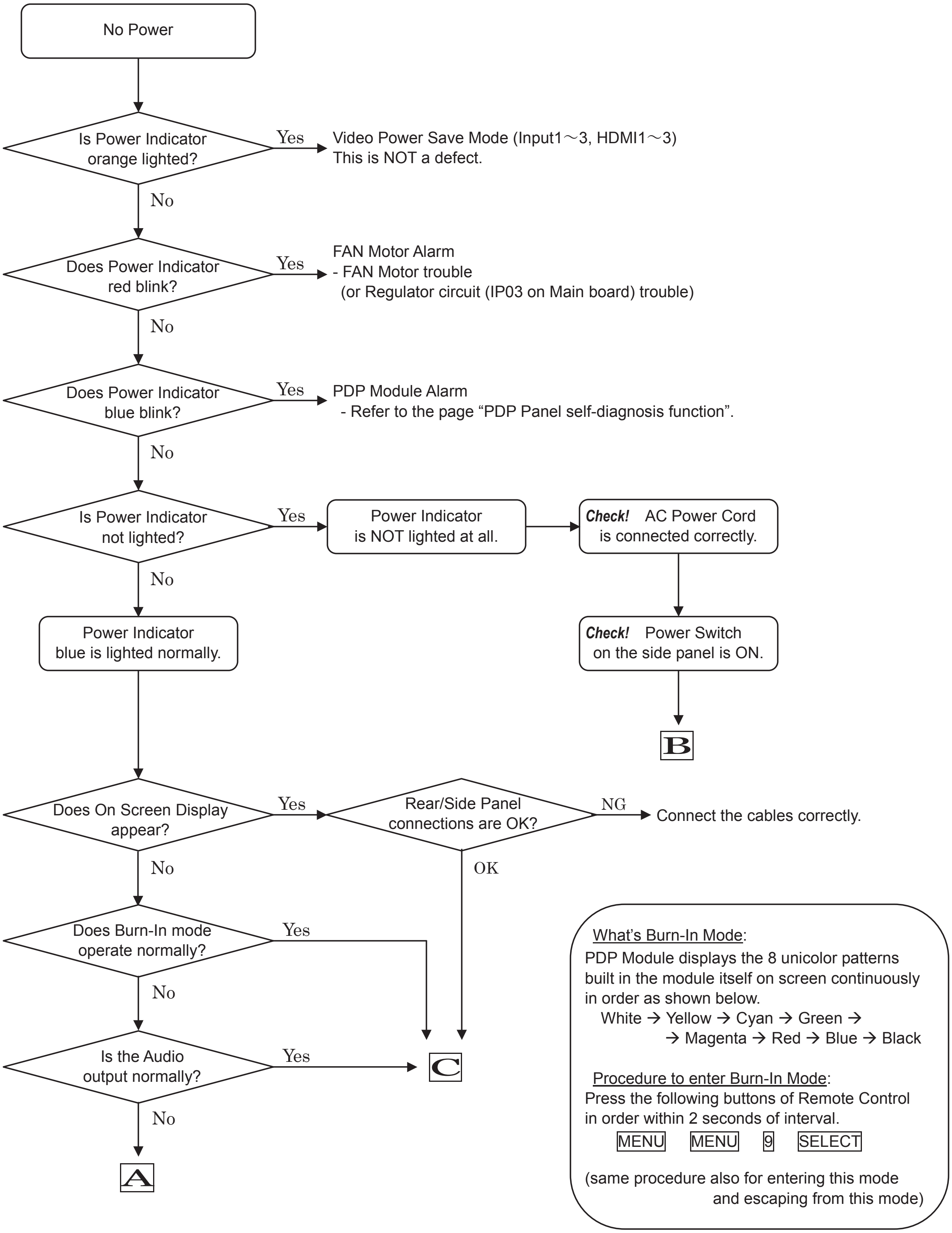
(5) Vcego : High → PSU outputs Vcc+5.1V for PDP Module.

(6) Vsago : High → PSU outputs Va and Vs for PDP Module.
(The voltage values of Va and Vs are indicated to the sticker on the PDP Module.)

If any control signal does not rise, PSU cannot output the voltage.
- PoWER_1/2 : not rise ----- Main board trouble
- Vcego/Vsago : not rise ----- PDP Module (Logic board) trouble
  However, Vcego rises when PNLRST/CPUgo (P901 [43] at Main board) is High, and
  Vsago rises when PNLoN/PDPgo (P901 [42] at Main board) is also High.

P50A402, P50A202 page 1/2

Troubleshooting Flowcharts


No Power
Is Power Indicator orange lighted?
Yes
Video Power Save Mode (Input1～3, HDMI1～3)
This is NOT a defect.
No
Does Power Indicator red blink?
Yes
FAN Motor Alarm
- FAN Motor trouble
(or Regulator circuit (IP03 on Main board) trouble)
No
Does Power Indicator blue blink?
Yes
PDP Module Alarm
- Refer to the page "PDP Panel self-diagnosis function".
No
Is Power Indicator not lighted?
Yes
Power Indicator is NOT lighted at all.
Check! AC Power Cord is connected correctly.
Check! Power Switch on the side panel is ON.
B
No
Power Indicator blue is lighted normally.
Does On Screen Display appear?
Yes
Rear/Side Panel connections are OK?
NG
Connect the cables correctly.
OK
No
Does Burn-In mode operate normally?
Yes
No
Is the Audio output normally?
Yes
C
No
A

What's Burn-In Mode:
PDP Module displays the 8 unicolor patterns built in the module itself on screen continuously in order as shown below.
White → Yellow → Cyan → Green →
→ Magenta → Red → Blue → Black

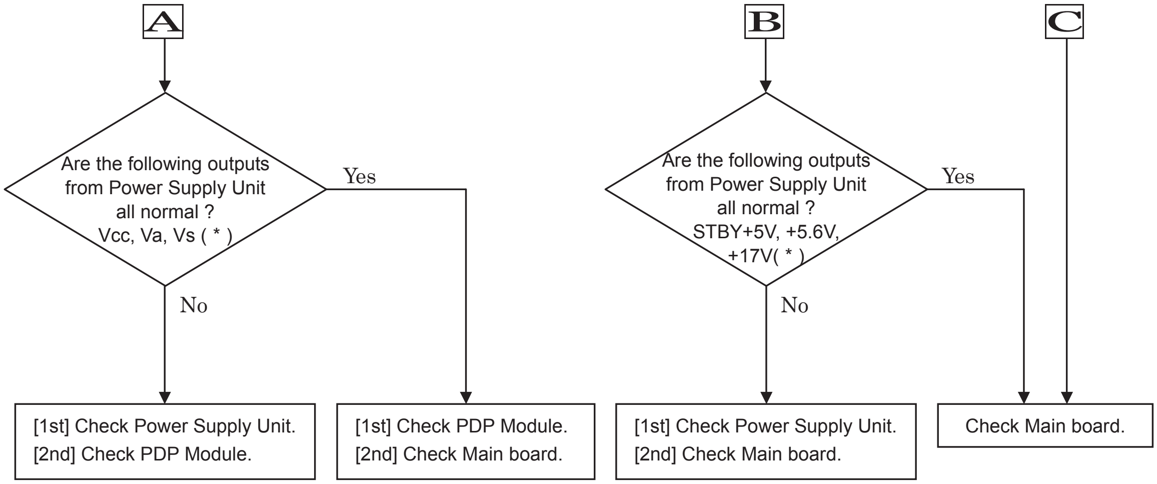
Procedure to enter Burn-In Mode:
Press the following buttons of Remote Control in order within 2 seconds of interval.
MENU MENU 9 SELECT

(same procedure also for entering this mode and escaping from this mode)

...TROUBLESHOOTING FLOWCHARTS (finished).

P50A402, P50A202 page 2/2

(The following is checking procedure after removing back cover.)


A
Are the following outputs from Power Supply Unit all normal ? Vcc, Va, Vs (*)
Yes
No
[1st] Check Power Supply Unit.
[2nd] Check PDP Module.
[1st] Check PDP Module.
[2nd] Check Main board.
B
Are the following outputs from Power Supply Unit all normal ? STBY+5V, +5.6V, +17V(*)
Yes
No
[1st] Check Power Supply Unit.
[2nd] Check Main board.
C
Check Main board.

*) Connector Pin assignment of Power Supply Unit

[CNPPS]	
1	Audio+17V
2	AudioGND
3	+17V
4	GND
5	+5.6V
6	+5.6V
7	GND
8	GND
9	STBY+5V
10	GND
11	AC CloCK
12	PoWER_1
13	PoWER_2
14	AC oFF
15	N.C.

[CN06]	
1	Vcc+5.1V
2	GND
3	Vra
4	Vrs
5	Vcego
6	Vsago
7	AC oFF

[CN23]	
1	Va
2	N.C.
3	Vcc+5.1V
4	GND
5	GND
6	GND
7	N.C.
8	Vs
9	Vs

*) Power-On control signals for Power Supply Unit

(1) AC power : Supplied → PSU outputs STBY+5V.

(2) Power Switch: ON : or Remote Power button : ON → PoWER_1 rises up.

(3) PoWER_1 : High → PSU outputs +5.6V.
and STBY+5V changes from 5.1V to 5.6V.

(4) PoWER_2 : High → PSU outputs +17V and Audio+17V.

(5) Vcego : High → PSU outputs Vcc+5.1V for PDP Module.

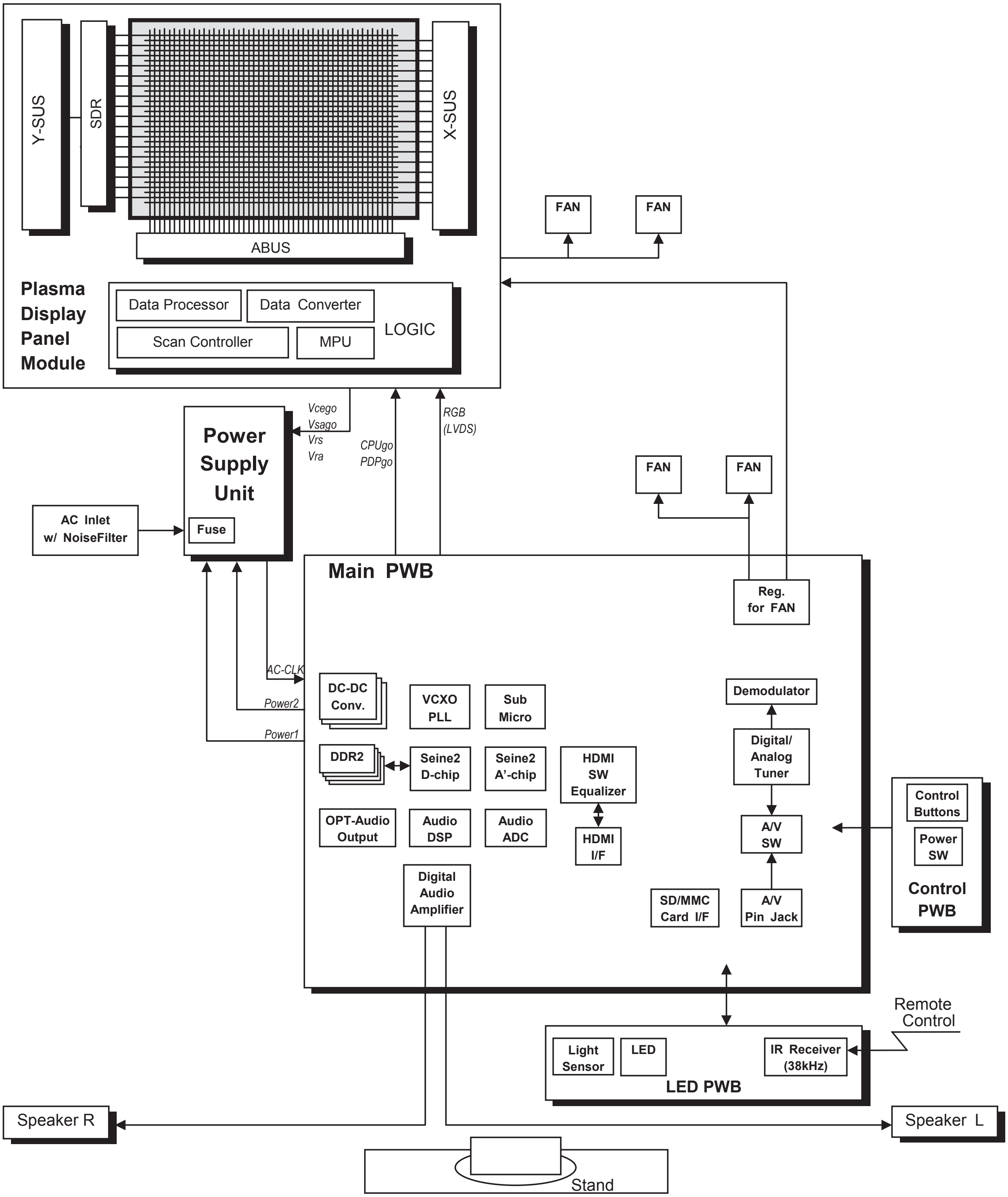
(6) Vsago : High → PSU outputs Va and Vs for PDP Module.
(The voltage values of Va and Vs are indicated to the sticker on the PDP Module.)

If any control signal does not rise, PSU cannot output the voltage.
- PoWER_1/2 : not rise ----- Main board trouble
- Vcego/Vsago : not rise ----- PDP Module (Logic board) trouble
  However, Vcego rises when PNLRST/CPUgo (P901 [43] at Main board) is High, and
  Vsago rises when PNLoN/PDPgo (P901 [42] at Main board) is also High.

BLOCK DIAGRAMS

P50S602 page 1/2

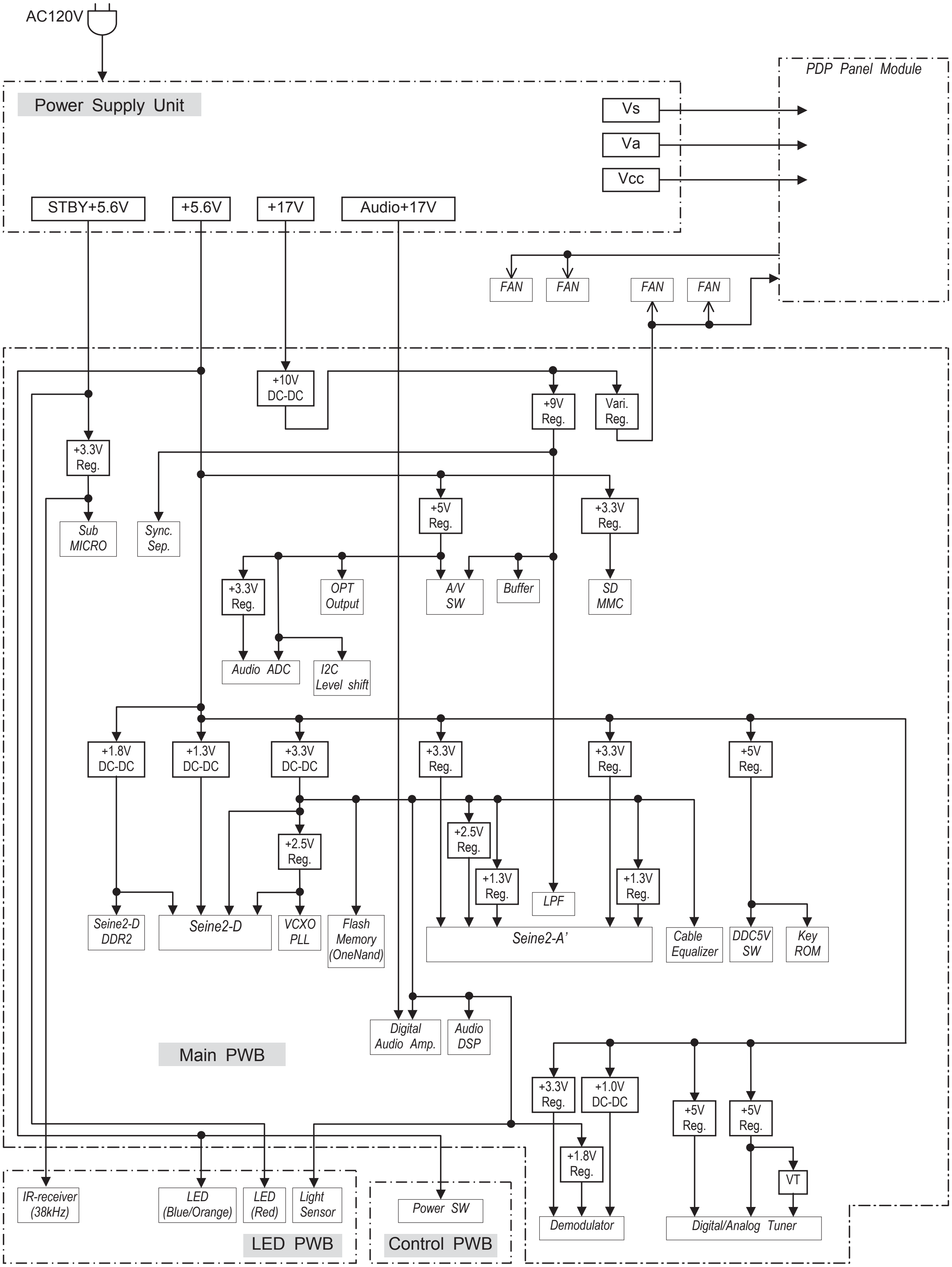
General block diagram


Y-SUS
SDR
X-SUS
ABUS
Plasma Display Panel Module
Data Processor
Data Converter
Scan Controller
MPU
LOGIC
FAN
FAN
Power Supply Unit
Fuse
Vcego
Vsago
Vrs
Vra
CPUgo
PDPgo
RGB (LVDS)
FAN
FAN
AC Inlet w/ NoiseFilter
Main PWB
Reg. for FAN
AC-CLK
Power2
Power1
DC-DC Conv.
VCXO PLL
Sub Micro
Demodulator
Digital/ Analog Tuner
DDR2
Seine2 D-chip
Seine2 A'-chip
HDMI SW Equalizer
OPT-Audio Output
Audio DSP
Audio ADC
HDMI I/F
A/V SW
Control Buttons
Power SW
Control PWB
Digital Audio Amplifier
SD/MMC Card I/F
A/V Pin Jack
Remote Control
Light Sensor
LED
IR Receiver (38kHz)
LED PWB
Speaker R
Speaker L
Stand

BLOCK DIAGRAMS

P50S602 page 2/2

Power System block diagram for the whole TV set.


AC120V
PDP Panel Module
Power Supply Unit
Vs
Va
Vcc
STBY+5.6V
+5.6V
+17V
Audio+17V
FAN
FAN
FAN
FAN
+10V DC-DC
+9V Reg.
Vari. Reg.
+3.3V Reg.
Sub MICRO
Sync. Sep.
+5V Reg.
+3.3V Reg.
+3.3V Reg.
OPT Output
A/V SW
Buffer
SD MMC
Audio ADC
I2C Level shift
+1.8V DC-DC
+1.3V DC-DC
+3.3V DC-DC
+3.3V Reg.
+3.3V Reg.
+5V Reg.
+2.5V Reg.
+2.5V Reg.
+1.3V Reg.
LPF
+1.3V Reg.
Seine2-D DDR2
Seine2-D
VCXO PLL
Flash Memory (OneNand)
Seine2-A'
Cable Equalizer
DDC5V SW
Key ROM
Digital Audio Amp.
Audio DSP
Main PWB
+3.3V Reg.
+1.0V DC-DC
+5V Reg.
+5V Reg.
+1.8V Reg.
VT
IR-receiver (38kHz)
LED (Blue/Orange)
LED (Red)
Light Sensor
LED PWB
Power SW
Control PWB
Demodulator
Digital/Analog Tuner

BLOCK DIAGRAMS

P50A402 and P50A202 page 1/2

General block diagram

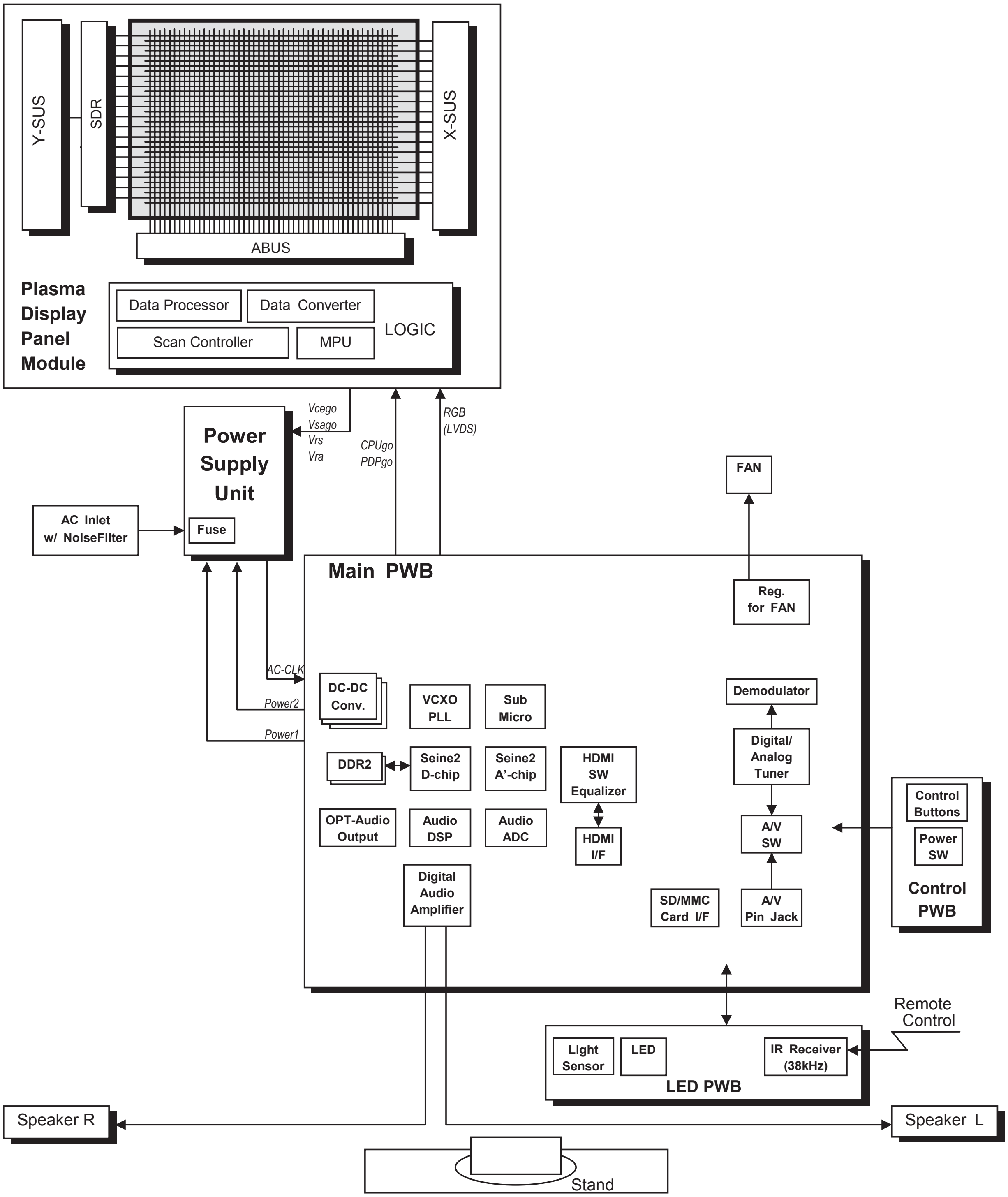
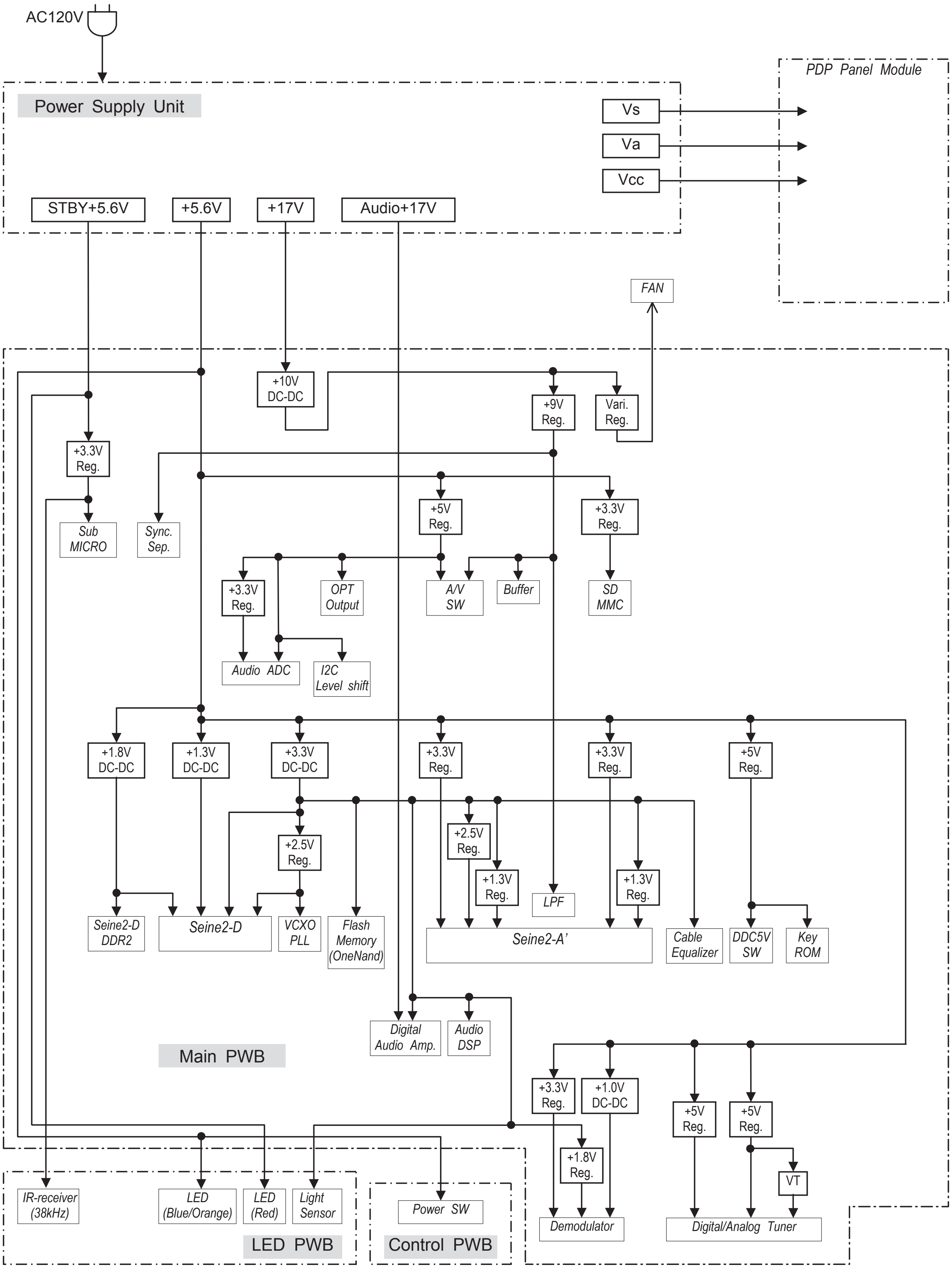

Y-SUS
SDR
X-SUS
ABUS
Plasma Display Panel Module
Data Processor
Data Converter
Scan Controller
MPU
LOGIC
Vcego
Vsago
Vrs
Vra
CPUgo
PDPgo
RGB
(LVDS)
Power Supply Unit
Fuse
AC Inlet
w/ NoiseFilter
FAN
Main PWB
Reg.
for FAN
AC-CLK
Power2
Power1
DC-DC
Conv.
VCXO
PLL
Sub
Micro
Demodulator
Digital/
Analog
Tuner
DDR2
Seine2
D-chip
Seine2
A'-chip
HDMI
SW
Equalizer
HDMI
I/F
OPT-Audio
Output
Audio
DSP
Audio
ADC
A/V
SW
Control
Buttons
Power
SW
Control
PWB
Digital
Audio
Amplifier
SD/MMC
Card I/F
A/V
Pin Jack
Remote
Control
Light
Sensor
LED
IR Receiver
(38kHz)
LED PWB
Speaker R
Speaker L
Stand

TABLE OF CONTENTS

BLOCK DIAGRAMS

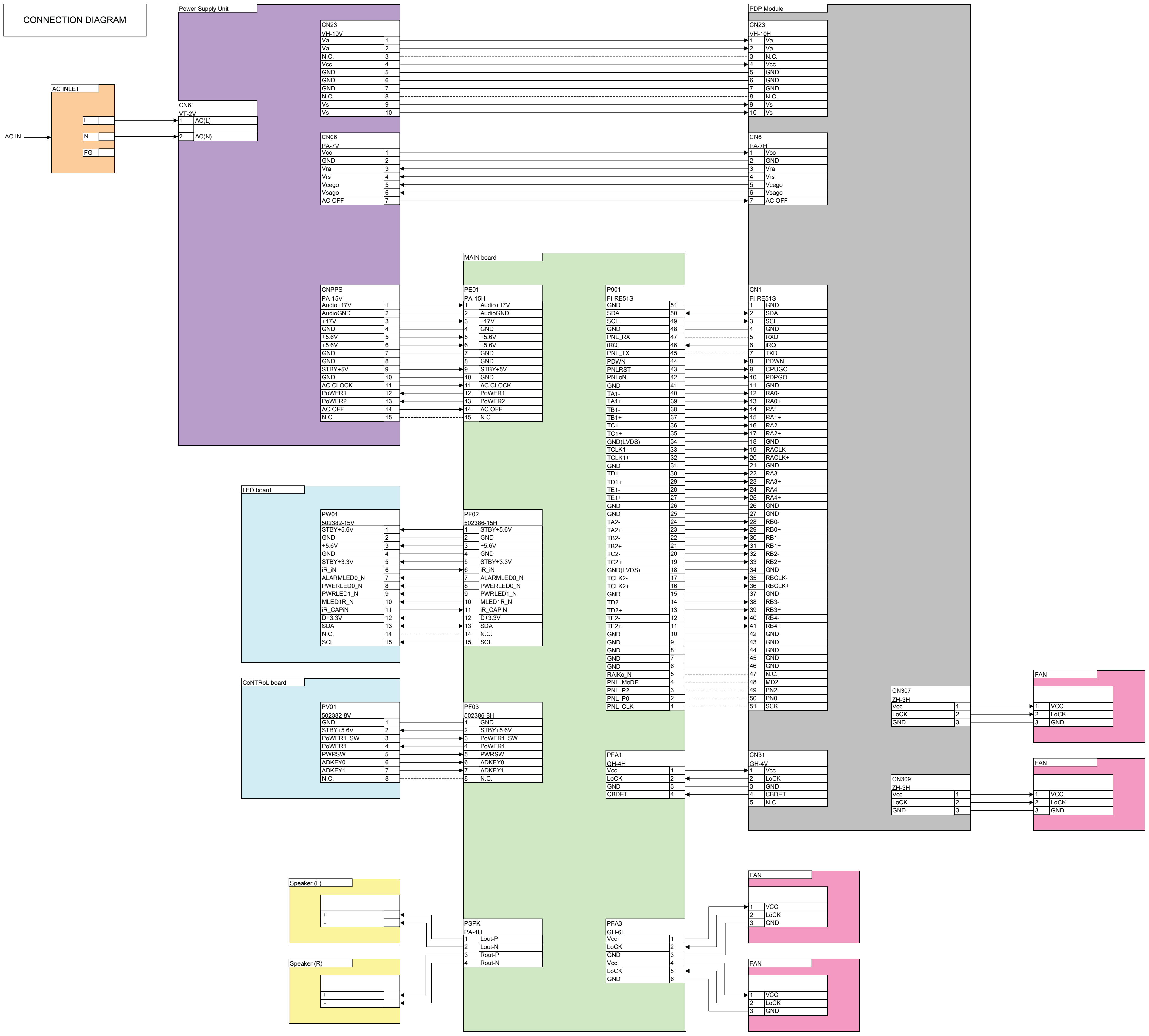
P50A402 and P50A202 page 2/2

Power System block diagram for the whole TV set.


AC120V
Power Supply Unit
Vs
Va
Vcc
STBY+5.6V
+5.6V
+17V
Audio+17V
PDP Panel Module
FAN
+10V DC-DC
+9V Reg.
Vari. Reg.
+3.3V Reg.
Sub MICRO
Sync. Sep.
+5V Reg.
+3.3V Reg.
+3.3V Reg.
OPT Output
A/V SW
Buffer
SD MMC
Audio ADC
I2C Level shift
+1.8V DC-DC
+1.3V DC-DC
+3.3V DC-DC
+3.3V Reg.
+3.3V Reg.
+5V Reg.
+2.5V Reg.
+2.5V Reg.
+1.3V Reg.
LPF
+1.3V Reg.
Seine2-D DDR2
Seine2-D
VCXO PLL
Flash Memory (OneNand)
Seine2-A'
Cable Equalizer
DDC5V SW
Key ROM
Digital Audio Amp.
Audio DSP
Main PWB
+3.3V Reg.
+1.0V DC-DC
+5V Reg.
+5V Reg.
+1.8V Reg.
VT
IR-receiver (38kHz)
LED (Blue/Orange)
LED (Red)
Light Sensor
LED PWB
Power SW
Control PWB
Demodulator
Digital/Analog Tuner

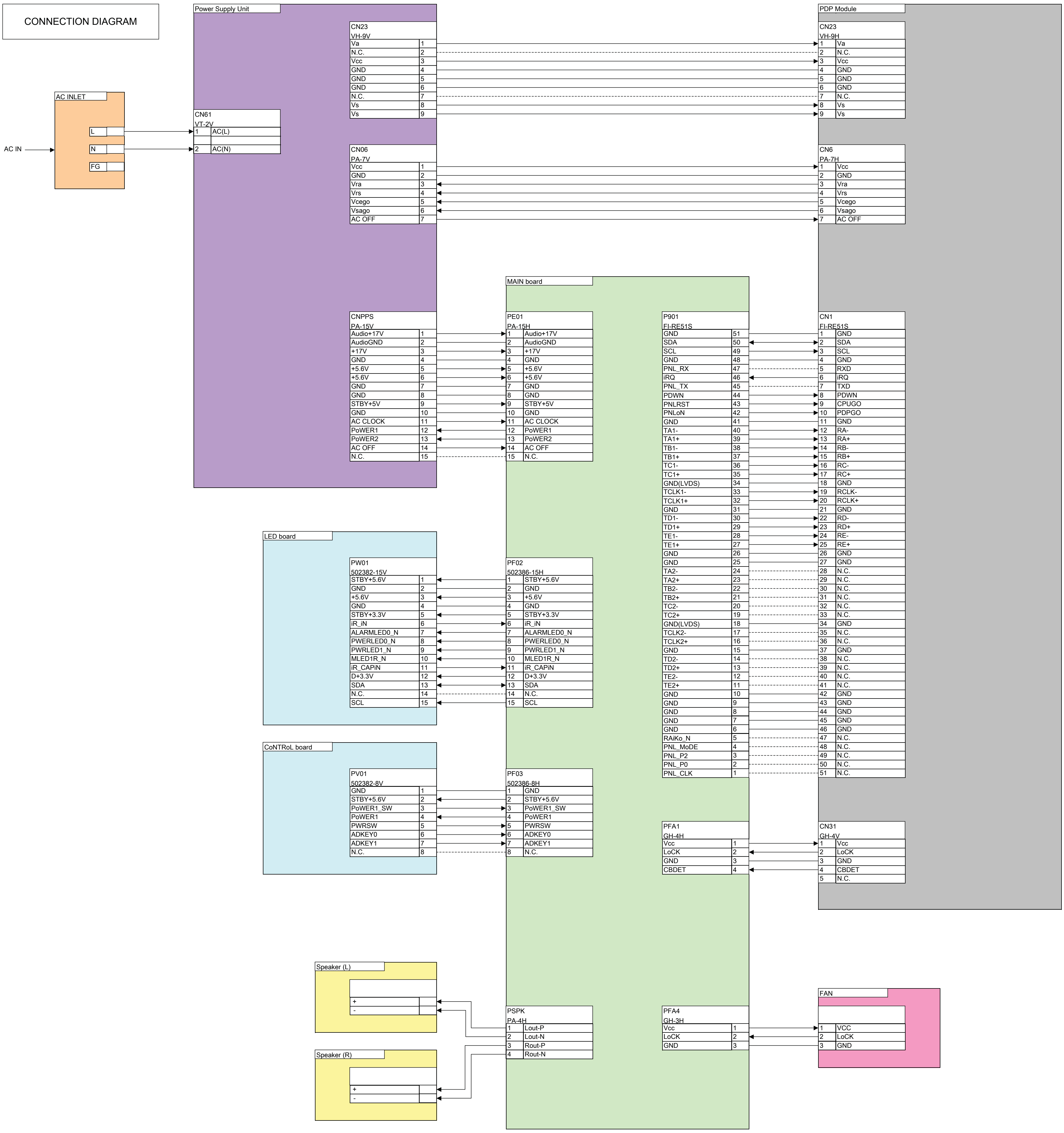
CONNECTION'S DIAGRAM

P50S602


CONNECTION DIAGRAM
AC IN
AC INLET
L
N
FG
Power Supply Unit
CN61
VT-2V
1 AC(L)
2 AC(N)
CN23
VH-10V
Va 1
Va 2
N.C. 3
Vcc 4
GND 5
GND 6
GND 7
N.C. 8
Vs 9
Vs 10
CN06
PA-7V
Vcc 1
GND 2
Vra 3
Vrs 4
Vcego 5
Vsago 6
AC OFF 7
CNPPS
PA-15V
Audio+17V 1
AudioGND 2
+17V 3
GND 4
+5.6V 5
+5.6V 6
GND 7
GND 8
STBY+5V 9
GND 10
AC CLOCK 11
PoWER1 12
PoWER2 13
AC OFF 14
N.C. 15
PDP Module
CN23
VH-10H
1 Va
2 Va
3 N.C.
4 Vcc
5 GND
6 GND
7 GND
8 N.C.
9 Vs
10 Vs
CN6
PA-7H
1 Vcc
2 GND
3 Vra
4 Vrs
5 Vcego
6 Vsago
7 AC OFF
MAIN board
PE01
PA-15H
1 Audio+17V
2 AudioGND
3 +17V
4 GND
5 +5.6V
6 +5.6V
7 GND
8 GND
9 STBY+5V
10 GND
11 AC CLOCK
12 PoWER1
13 PoWER2
14 AC OFF
15 N.C.
P901
FI-RE51S
GND 51
SDA 50
SCL 49
GND 48
PNL_RX 47
iRQ 46
PNL_TX 45
PDWN 44
PNLRST 43
PNLoN 42
GND 41
TA1- 40
TA1+ 39
TB1- 38
TB1+ 37
TC1- 36
TC1+ 35
GND(LVDS) 34
TCLK1- 33
TCLK1+ 32
GND 31
TD1- 30
TD1+ 29
TE1- 28
TE1+ 27
GND 26
GND 25
TA2- 24
TA2+ 23
TB2- 22
TB2+ 21
TC2- 20
TC2+ 19
GND(LVDS) 18
TCLK2- 17
TCLK2+ 16
GND 15
TD2- 14
TD2+ 13
TE2- 12
TE2+ 11
GND 10
GND 9
GND 8
GND 7
GND 6
RAiKo_N 5
PNL_MoDE 4
PNL_P2 3
PNL_P0 2
PNL_CLK 1
CN1
FI-RE51S
1 GND
2 SDA
3 SCL
4 GND
5 RXD
6 iRQ
7 TXD
8 PDWN
9 CPUGO
10 PDPGO
11 GND
12 RA0-
13 RA0+
14 RA1-
15 RA1+
16 RA2-
17 RA2+
18 GND
19 RACLK-
20 RACLK+
21 GND
22 RA3-
23 RA3+
24 RA4-
25 RA4+
26 GND
27 GND
28 RB0-
29 RB0+
30 RB1-
31 RB1+
32 RB2-
33 RB2+
34 GND
35 RBCLK-
36 RBCLK+
37 GND
38 RB3-
39 RB3+
40 RB4-
41 RB4+
42 GND
43 GND
44 GND
45 GND
46 GND
47 N.C.
48 MD2
49 PN2
50 PN0
51 SCK
LED board
PW01
502382-15V
STBY+5.6V 1
GND 2
+5.6V 3
GND 4
STBY+3.3V 5
iR_iN 6
ALARMLED0_N 7
PWERLED0_N 8
PWRLED1_N 9
MLED1R_N 10
iR_CAPiN 11
D+3.3V 12
SDA 13
N.C. 14
SCL 15
PF02
502386-15H
1 STBY+5.6V
2 GND
3 +5.6V
4 GND
5 STBY+3.3V
6 iR_iN
7 ALARMLED0_N
8 PWERLED0_N
9 PWRLED1_N
10 MLED1R_N
11 iR_CAPiN
12 D+3.3V
13 SDA
14 N.C.
15 SCL
CoNTRoL board
PV01
502382-8V
GND 1
STBY+5.6V 2
PoWER1_SW 3
PoWER1 4
PWRSW 5
ADKEY0 6
ADKEY1 7
N.C. 8
PF03
502386-8H
1 GND
2 STBY+5.6V
3 PoWER1_SW
4 PoWER1
5 PWRSW
6 ADKEY0
7 ADKEY1
8 N.C.
PFA1
GH-4H
Vcc 1
LoCK 2
GND 3
CBDET 4
CN31
GH-4V
1 Vcc
2 LoCK
3 GND
4 CBDET
5 N.C.
CN307
ZH-3H
Vcc 1
LoCK 2
GND 3
FAN
1 VCC
2 LoCK
3 GND
CN309
ZH-3H
Vcc 1
LoCK 2
GND 3
FAN
1 VCC
2 LoCK
3 GND
Speaker (L)
+
-
Speaker (R)
+
-
PSPK
PA-4H
1 Lout-P
2 Lout-N
3 Rout-P
4 Rout-N
PFA3
GH-6H
Vcc 1
LoCK 2
GND 3
Vcc 4
LoCK 5
GND 6
FAN
1 VCC
2 LoCK
3 GND
FAN
1 VCC
2 LoCK
3 GND

CONNECTION'S DIAGRAM

P50A402 and P50A202



Power Supply Unit CN23 VH-9V → PDP Module CN23 VH-9H

CN23 VH-9V	Pin	Pin	CN23 VH-9H
Va	1	1	Va
N.C.	2	2	N.C.
Vcc	3	3	Vcc
GND	4	4	GND
GND	5	5	GND
GND	6	6	GND
N.C.	7	7	N.C.
Vs	8	8	Vs
Vs	9	9	Vs

AC INLET → Power Supply Unit CN61 VT-2V

AC INLET	Pin	CN61 VT-2V
L	1	AC(L)
N	2	AC(N)
FG		

Power Supply Unit CN06 PA-7V ↔ PDP Module CN6 PA-7H

CN06 PA-7V	Pin	Pin	CN6 PA-7H
Vcc	1	1	Vcc
GND	2	2	GND
Vra	3	3	Vra
Vrs	4	4	Vrs
Vcego	5	5	Vcego
Vsago	6	6	Vsago
AC OFF	7	7	AC OFF

Power Supply Unit CNPPS PA-15V ↔ MAIN board PE01 PA-15H

CNPPS PA-15V	Pin	Pin	PE01 PA-15H
Audio+17V	1	1	Audio+17V
AudioGND	2	2	AudioGND
+17V	3	3	+17V
GND	4	4	GND
+5.6V	5	5	+5.6V
+5.6V	6	6	+5.6V
GND	7	7	GND
GND	8	8	GND
STBY+5V	9	9	STBY+5V
GND	10	10	GND
AC CLOCK	11	11	AC CLOCK
PoWER1	12	12	PoWER1
PoWER2	13	13	PoWER2
AC OFF	14	14	AC OFF
N.C.	15	15	N.C.

MAIN board P901 FI-RE51S ↔ PDP Module CN1 FI-RE51S

P901 FI-RE51S	Pin	Pin	CN1 FI-RE51S
GND	51	1	GND
SDA	50	2	SDA
SCL	49	3	SCL
GND	48	4	GND
PNL_RX	47	5	RXD
iRQ	46	6	iRQ
PNL_TX	45	7	TXD
PDWN	44	8	PDWN
PNLRST	43	9	CPUGO
PNLoN	42	10	PDPGO
GND	41	11	GND
TA1-	40	12	RA-
TA1+	39	13	RA+
TB1-	38	14	RB-
TB1+	37	15	RB+
TC1-	36	16	RC-
TC1+	35	17	RC+
GND(LVDS)	34	18	GND
TCLK1-	33	19	RCLK-
TCLK1+	32	20	RCLK+
GND	31	21	GND
TD1-	30	22	RD-
TD1+	29	23	RD+
TE1-	28	24	RE-
TE1+	27	25	RE+
GND	26	26	GND
GND	25	27	GND
TA2-	24	28	N.C.
TA2+	23	29	N.C.
TB2-	22	30	N.C.
TB2+	21	31	N.C.
TC2-	20	32	N.C.
TC2+	19	33	N.C.
GND(LVDS)	18	34	GND
TCLK2-	17	35	N.C.
TCLK2+	16	36	N.C.
GND	15	37	GND
TD2-	14	38	N.C.
TD2+	13	39	N.C.
TE2-	12	40	N.C.
TE2+	11	41	N.C.
GND	10	42	GND
GND	9	43	GND
GND	8	44	GND
GND	7	45	GND
GND	6	46	GND
RAiKo_N	5	47	N.C.
PNL_MoDE	4	48	N.C.
PNL_P2	3	49	N.C.
PNL_P0	2	50	N.C.
PNL_CLK	1	51	N.C.

LED board PW01 502382-15V ↔ MAIN board PF02 502386-15H

PW01 502382-15V	Pin	Pin	PF02 502386-15H
STBY+5.6V	1	1	STBY+5.6V
GND	2	2	GND
+5.6V	3	3	+5.6V
GND	4	4	GND
STBY+3.3V	5	5	STBY+3.3V
iR_iN	6	6	iR_iN
ALARMLED0_N	7	7	ALARMLED0_N
PWERLED0_N	8	8	PWERLED0_N
PWRLED1_N	9	9	PWRLED1_N
MLED1R_N	10	10	MLED1R_N
iR_CAPiN	11	11	iR_CAPiN
D+3.3V	12	12	D+3.3V
SDA	13	13	SDA
N.C.	14	14	N.C.
SCL	15	15	SCL

CoNTRoL board PV01 502382-8V ↔ MAIN board PF03 502386-8H

PV01 502382-8V	Pin	Pin	PF03 502386-8H
GND	1	1	GND
STBY+5.6V	2	2	STBY+5.6V
PoWER1_SW	3	3	PoWER1_SW
PoWER1	4	4	PoWER1
PWRSW	5	5	PWRSW
ADKEY0	6	6	ADKEY0
ADKEY1	7	7	ADKEY1
N.C.	8	8	N.C.

MAIN board PFA1 GH-4H ↔ PDP Module CN31 GH-4V

PFA1 GH-4H	Pin	Pin	CN31 GH-4V
Vcc	1	1	Vcc
LoCK	2	2	LoCK
GND	3	3	GND
CBDET	4	4	CBDET
		5	N.C.

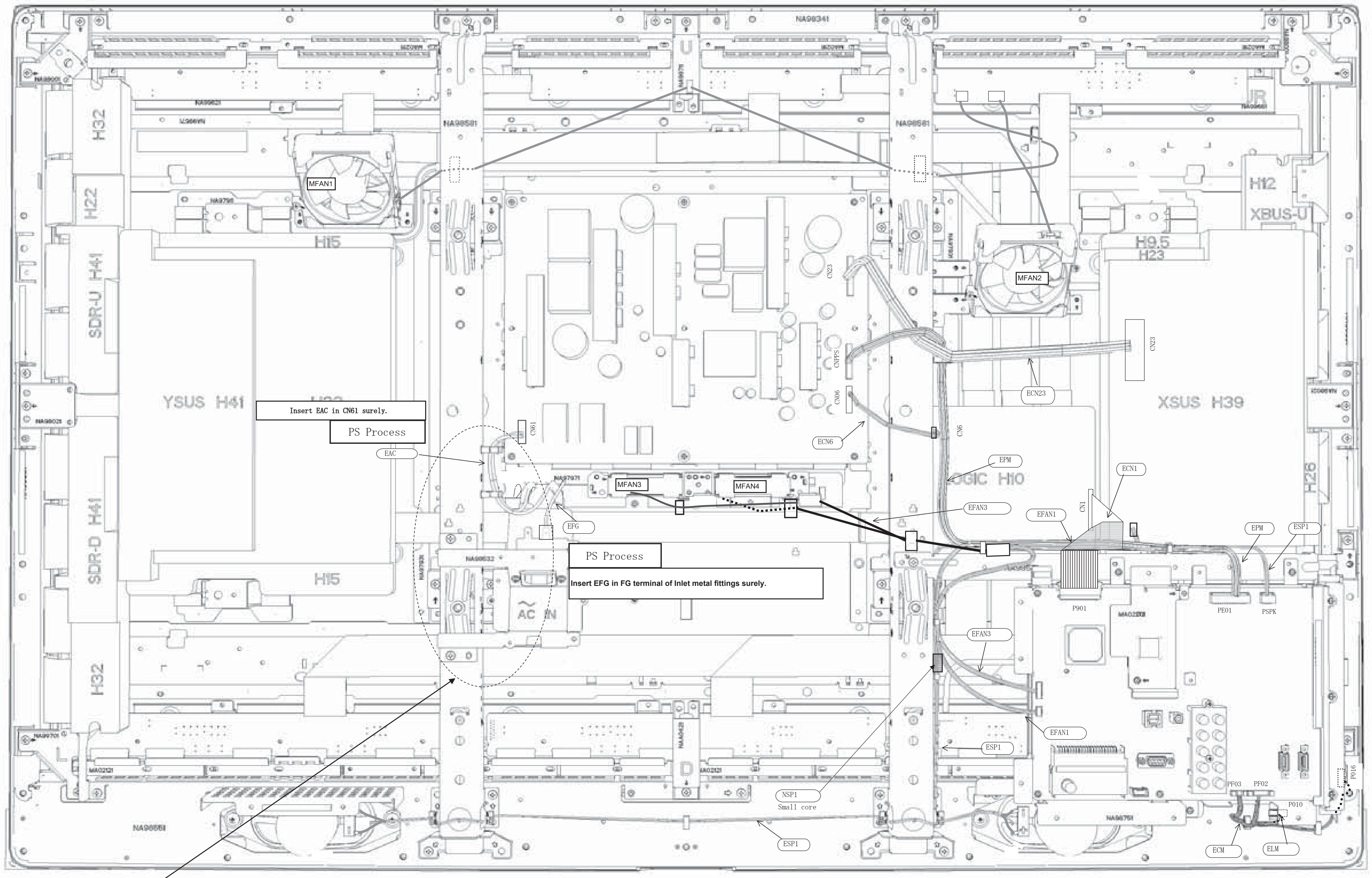
MAIN board PSPK PA-4H → Speaker (L) / Speaker (R)

PSPK PA-4H	Pin
Lout-P	1
Lout-N	2
Rout-P	3
Rout-N	4

MAIN board PFA4 GH-3H ↔ FAN

PFA4 GH-3H	Pin	Pin	FAN
Vcc	1	1	VCC
LoCK	2	2	LoCK
GND	3	3	GND

D8UF(P50S602) WIRING DIAGRAM


MFAN1
MFAN2
MFAN3
MFAN4
H32
H22
SDR-U H41
SDR-D H41
YSUS H41
H15
H12
XBUS-U
H9.5
H23
XSUS H39
LOGIC H10
H26
CN23
CN06
CN61
CN6
CN1
AC IN
EAC
EFG
ECN23
ECN6
EPM
ECN1
EFAN3
EFAN1
ESP1
P901
PE01
PSPK
PF03
PF02
P010
P016
NSP1
Small core
ECM
ELM
NA98341
NA98581

Insert EAC in CN61 surely.

PS Process

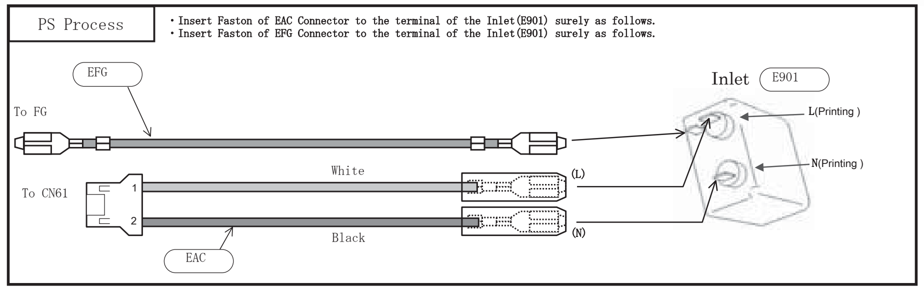
PS Process

Insert EFG in FG terminal of Inlet metal fittings surely.

Table of Using cable (S602)

		PlugPin1		PlugPin2	
No.	Symbol name	Board or Location	Name	Board or Location	Name
1	ELM	Main	PF02	LED PWB	P010
2	EPM	Main	PE01	Power Unit	P002
3	ECM	Main	PF03	CONTROL PWB	P016
4	EFAN1	Main	PFA1	X-SUS	-
5	EFAN3	Main	PFA3	MFAN3/MFAN4	-
6	ESP1	Main	PSPK	SP-L/SP-R	Speaker
7	ECN6	Power	CN06	PANEL LOGIC	CN6
8	ECN1	Main	P901	PANEL LOGIC	CN1
9	ECN23	Power	CN23	PANEL X-SUS	CN23
10	EAC	Power	CN61	Inlet	1:L,2:N
11	EFG	Inlet Metal	FG	Inlet	GND

Inlet(E901) Preparations

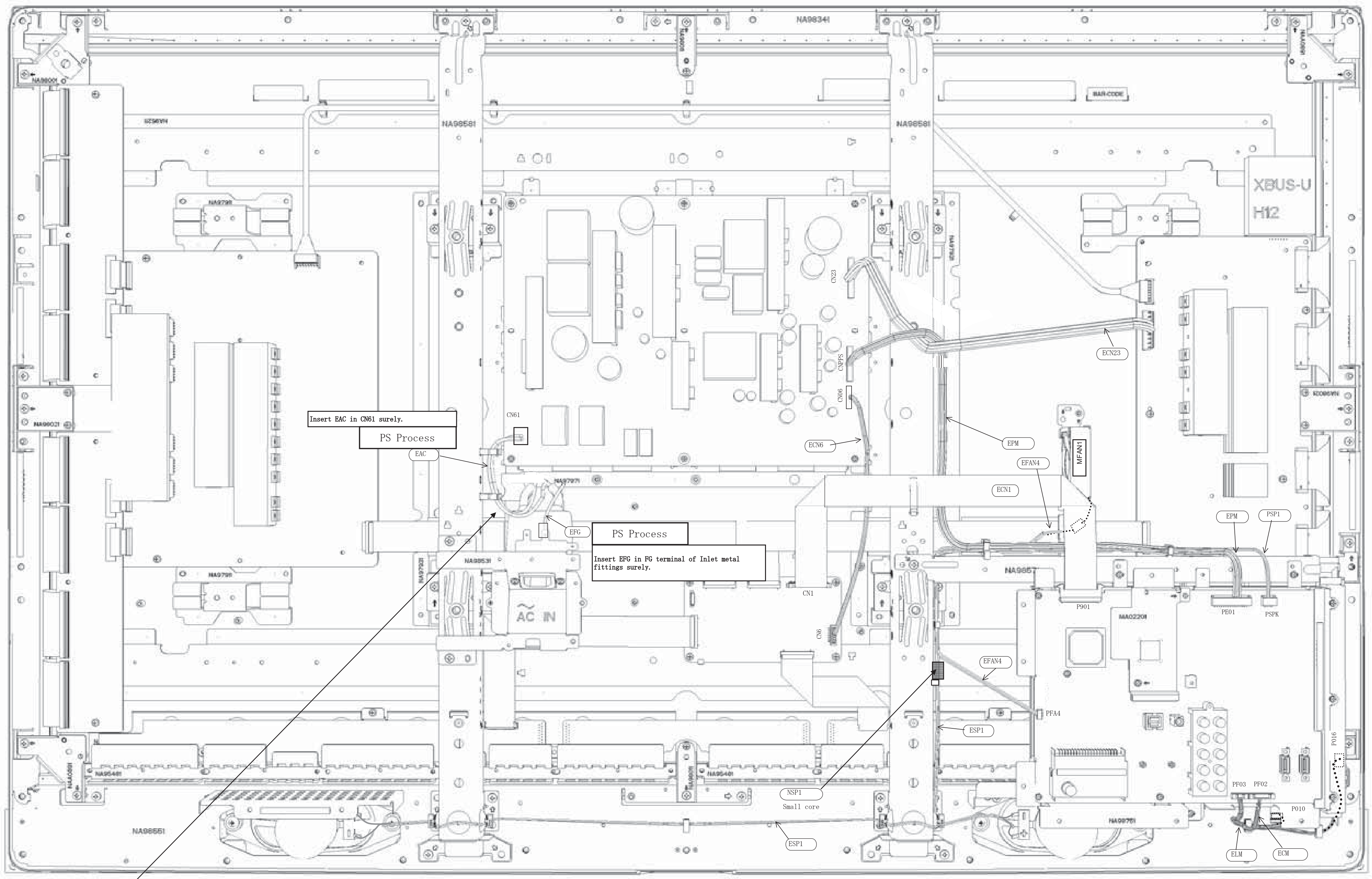

PS Process
EFG
To FG
To CN61
1
2
White
Black
EAC
Inlet
E901
L(Printing)
N(Printing)
(L)
(N)

- Insert Faston of EAC Connector to the terminal of the Inlet(E901) surely as follows.
- Insert Faston of EFG Connector to the terminal of the Inlet(E901) surely as follows.

Specifications.

1.This drawing shows the wiring diagram for P50S602.
The connector and wire styling are in the figure.
2.This drawing shows the rear view of the set.
3.Lock lead holders surely.
4.Work by the dropping impact noting handling
the noise performance and longevity because
it is likely to be deteriorated FAN.
Do not use the FAN if you drop it.

D8UF(P50A402/A202) WIRING DIAGRAM


NA98341
NA98001
NA98581
NA98581
BAR-CODE
XBUS-U
H12
NA9798
NA9798
CN23
CNPS
CN06
CN61
EAC
NA97971
EFG
NA98531
AC IN
ECN23
ECN6
EPM
EFAN4
MFAN1
ECN1
EPM
PSP1
NA9857
P901
MA02201
PE01
PSPK
CN1
CN6
EFAN4
PFA4
ESP1
P016
PF03
PF02
P010
NA98751
ELM
ECM
NSP1
Small core
ESP1
NA98551
NA95481
NA95481
NA98021

PS Process

Insert EAC in CN61 surely.

PS Process

Insert EFG in FG terminal of Inlet metal fittings surely.

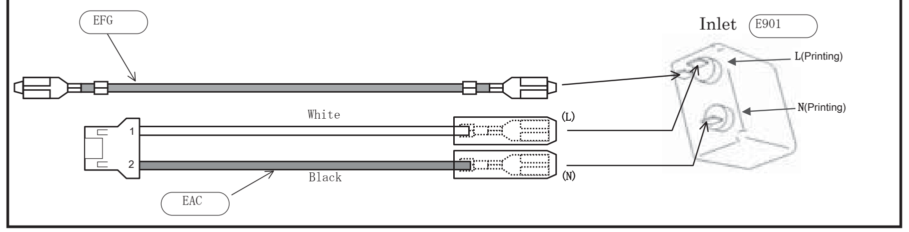
Table of Using cable (A402/A202)

		PlugPin1		PlugPin2	
No.	Symbol name	Board or Location	Name	Board or Location	Name
1	ELM	Main	PF02	LED PWB	P010
2	EPM	Main	PE01	Power Unit	P002
3	ECM	Main	PF03	CONTROL PWB	P016
4	EFAN4	Main	PFA4	MFAN1	-
5	ESP1	Main	PSPK	SP-L/SP-R	Speaker
6	ECN6	Power	CN06	PANEL LOGIC	CN6
7	ECN1	Main	P901	PANEL LOGIC	CN1
8	ECN23	Power	CN23	PANEL X-SUS	CN23
9	EAC	Power	CN61	Inlet	1:L,2:N
10	EFG	Inlet Metal	FG	Inlet	GND

Inlet(E901) Preparations

PS Process

- Insert Faston of EAC Connector to the terminal of the Inlet(E901) surely as follows.
- Insert Faston of EFG Connector to the terminal of the Inlet(E901) surely as follows.


EFG
Inlet
E901
L(Printing)
N(Printing)
White
(L)
1
2
Black
(N)
EAC

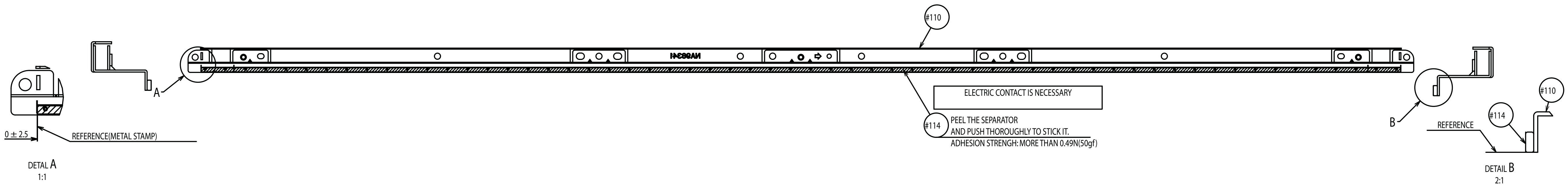
Specifications.

1.This drawing shows the wiring diagram for P50A402/A202.
The connector and wire styling are in the figure.
2.This drawing shows the rear view of the set.
3.Lock lead holders surely.
4.Work by the dropping impact noting handling the noise performance and longevity because it is likely to be deteriorated FAN.
Do not use the FAN if you drop it.

THE QUICK DISASSEMBLY GUIDES ARE PENDING.

SORRY FOR THE INCONVENIENCES.

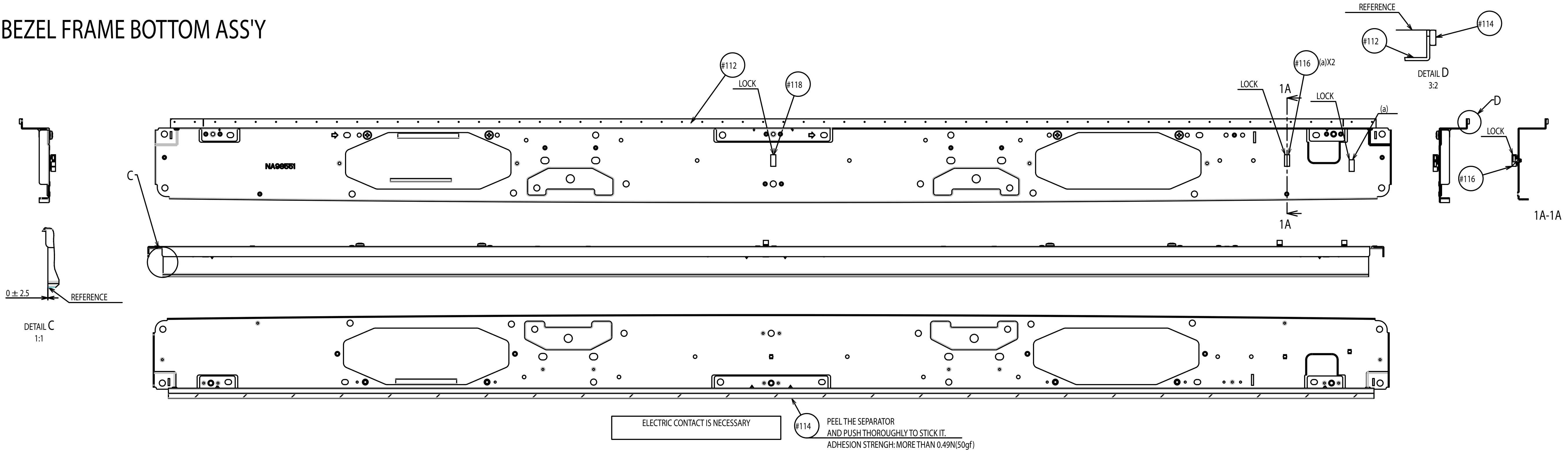
1.BEZEL FRAME TOP ASS'Y


#110
A
0 ± 2.5
REFERENCE(METAL STAMP)
DETAIL A
1:1
B
REFERENCE
#114
#110
DETAIL B
2:1

ELECTRIC CONTACT IS NECESSARY

#114 PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

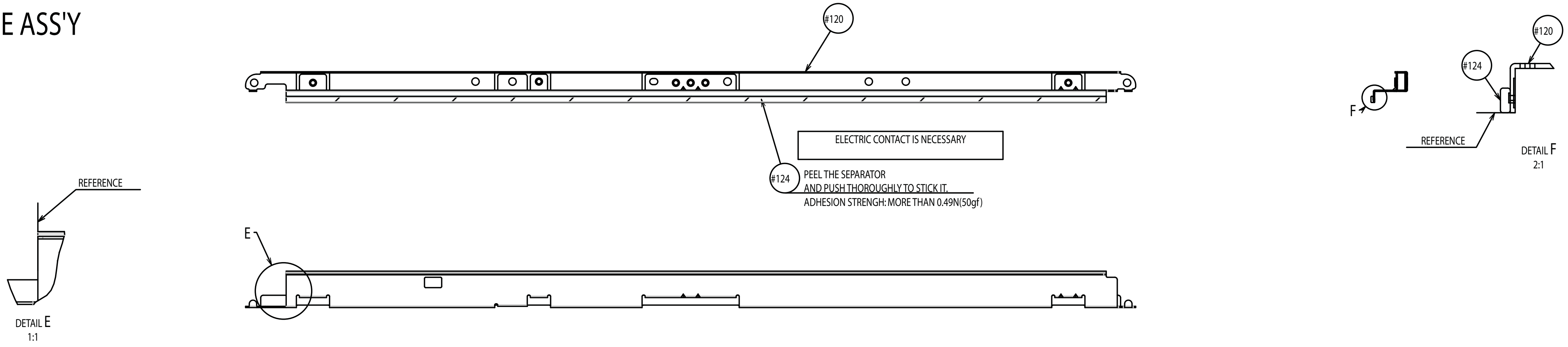
2.BEZEL FRAME BOTTOM ASS'Y


REFERENCE
#114
#112
DETAIL D
3:2
#112
LOCK
#118
#116 (a)X2
LOCK
1A
LOCK
(a)
D
LOCK
#116
1A-1A
C
1A
0 ± 2.5
REFERENCE
DETAIL C
1:1

ELECTRIC CONTACT IS NECESSARY

#114 PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

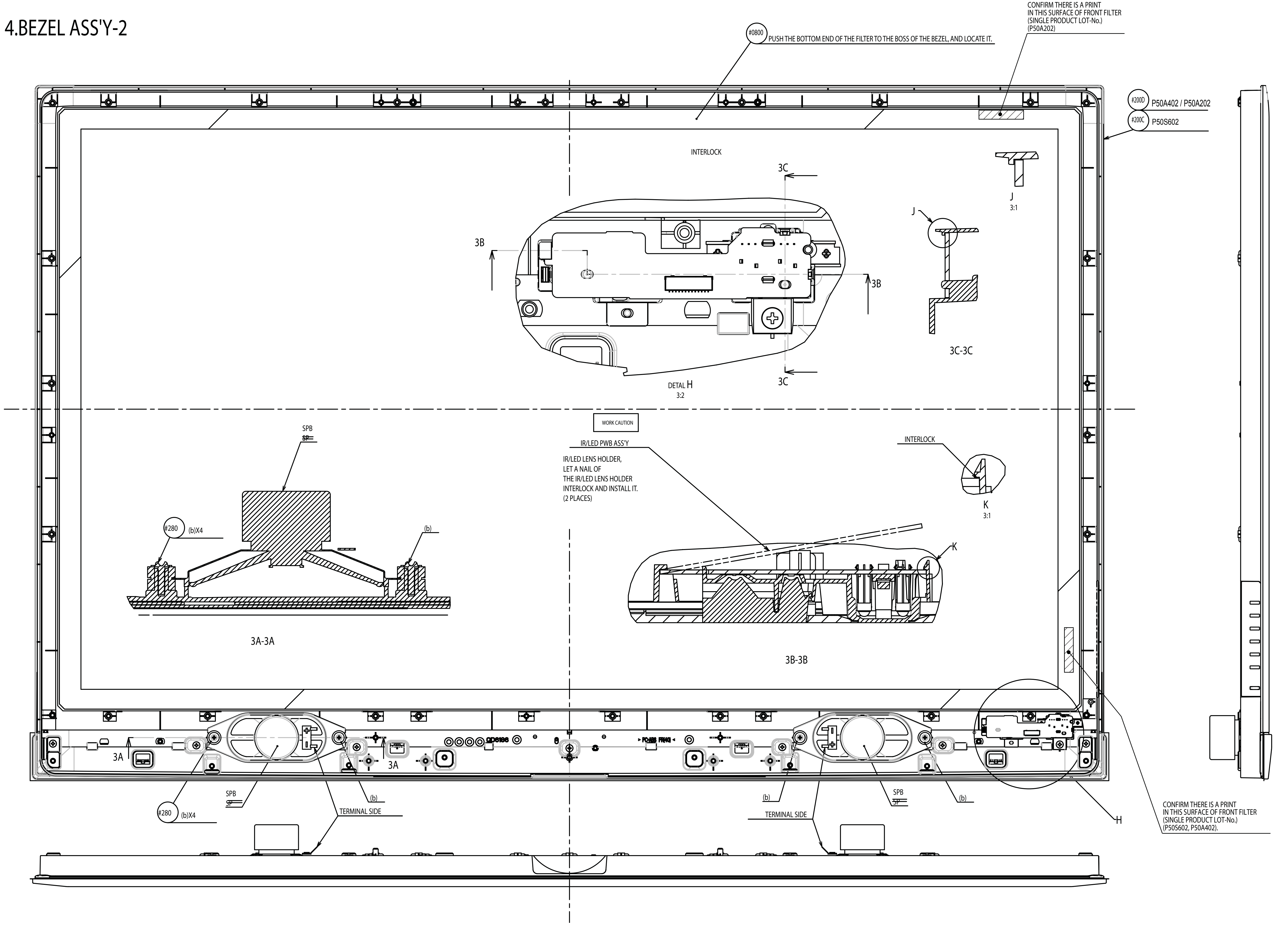
3.BEZEL FRAME SIDE ASS'Y


#120
E
REFERENCE
DETAIL E
1:1
F
#124
#120
REFERENCE
DETAIL F
2:1

ELECTRIC CONTACT IS NECESSARY

#124 PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

4.BEZEL ASS'Y-2


#0800 PUSH THE BOTTOM END OF THE FILTER TO THE BOSS OF THE BEZEL, AND LOCATE IT.

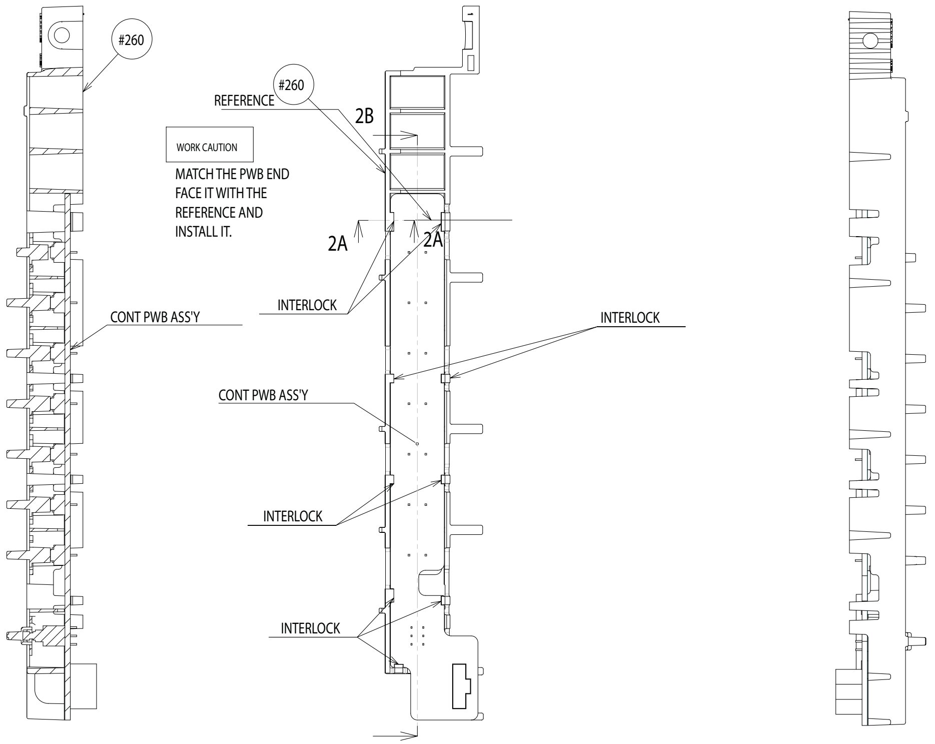
CONFIRM THERE IS A PRINT
IN THIS SURFACE OF FRONT FILTER
(SINGLE PRODUCT LOT-No.)
(P50A202)

IR/LED LENS HOLDER,
LET A NAIL OF
THE IR/LED LENS HOLDER
INTERLOCK AND INSTALL IT.
(2 PLACES)

CONFIRM THERE IS A PRINT
IN THIS SURFACE OF FRONT FILTER
(SINGLE PRODUCT LOT-No.)
(P50S602, P50A402).

#200D P50A402 / P50A202
#200C P50S602
INTERLOCK
3C
3B
3B
J
J
3:1
3C-3C
3C
DETAL H
3:2
WORK CAUTION
IR/LED PWB ASS'Y
INTERLOCK
K
3:1
K
SPB
SP
#280 (b)X4
(b)
3A-3A
3B-3B
3A
3A
QD6196
PC-ABS FR(40)
SPB
SP
#280 (b)X4
(b)
TERMINAL SIDE
(b)
TERMINAL SIDE
SPB
SP
(b)
H

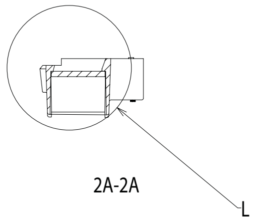
5.CONT UNIT ASS'Y


#260
REFERENCE
#260
2B
2A
2A
CONT PWB ASS'Y
INTERLOCK
INTERLOCK
CONT PWB ASS'Y
INTERLOCK
INTERLOCK
2B

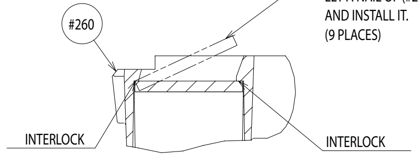
WORK CAUTION

MATCH THE PWB END
FACE IT WITH THE
REFERENCE AND
INSTALL IT.

2B-2B



2A-2A


#260
INTERLOCK
INTERLOCK

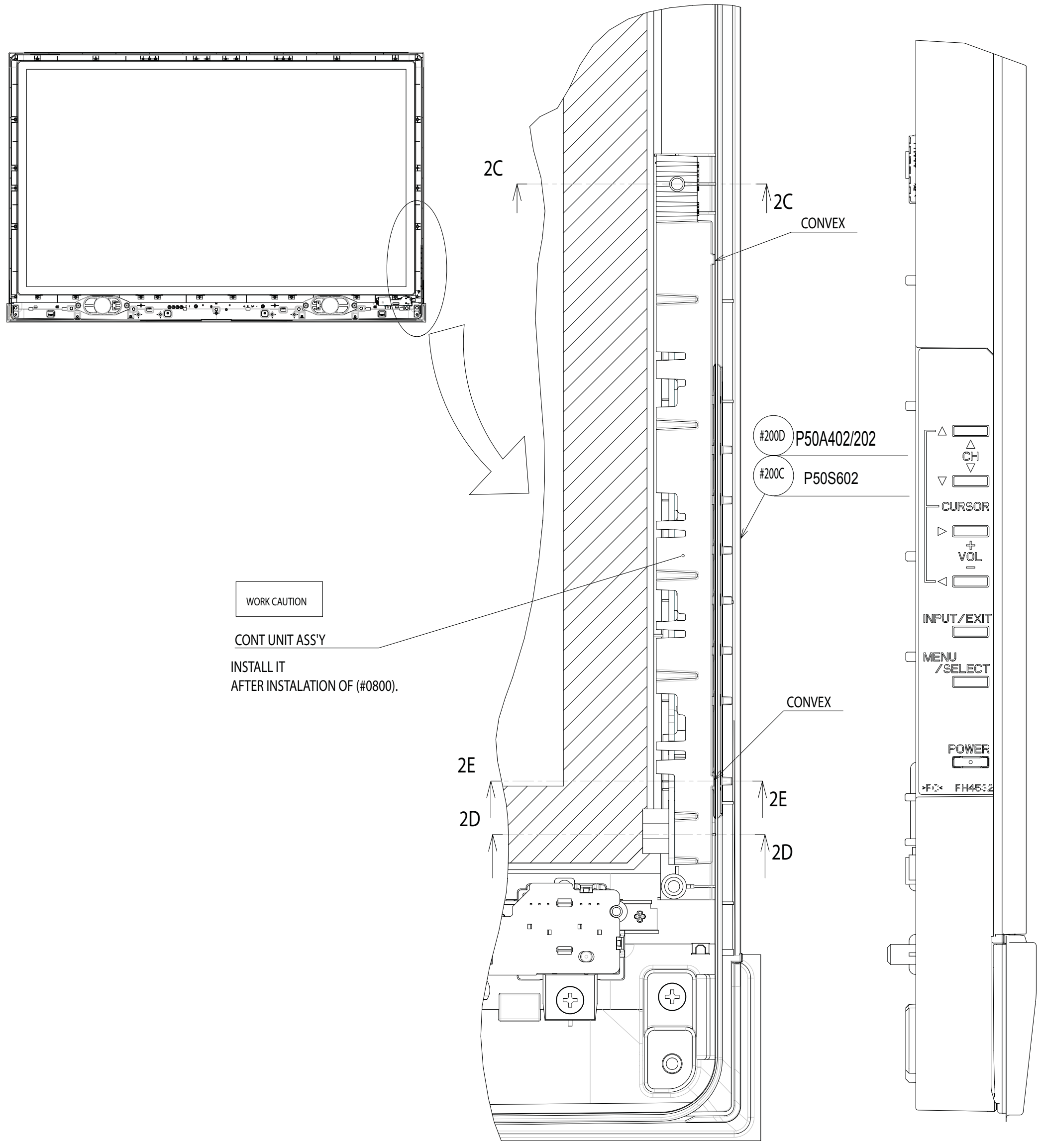
WORK CAUTION

CONT PWB ASS'Y

LET A NAIL OF (#260) INTERLOCK
AND INSTALL IT.
(9 PLACES)

L
2:1

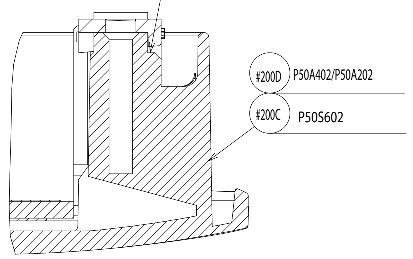
6.BEZEL ASS'Y-2


2C
2C
CONVEX
#200D P50A402/202
#200C P50S602
CONVEX
2E
2D
2E
2D
CH
CURSOR
VOL
INPUT/EXIT
MENU /SELECT
POWER

WORK CAUTION

CONT UNIT ASS'Y

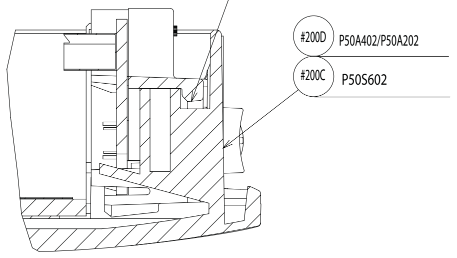
INSTALL IT
AFTER INSTALATION OF (#0800).


#200D P50A402/P50A202
#200C P50S602

WORK CAUTION

DO NOT RUN ONTO THE BEZEL.
CONT UNIT ASS'Y

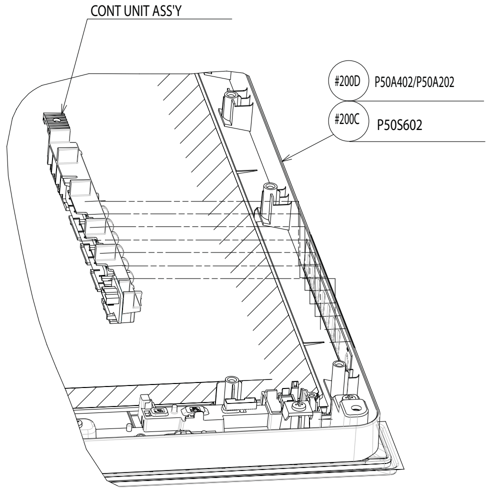
2C-2C


#200D P50A402/P50A202
#200C P50S602

WORK CAUTION

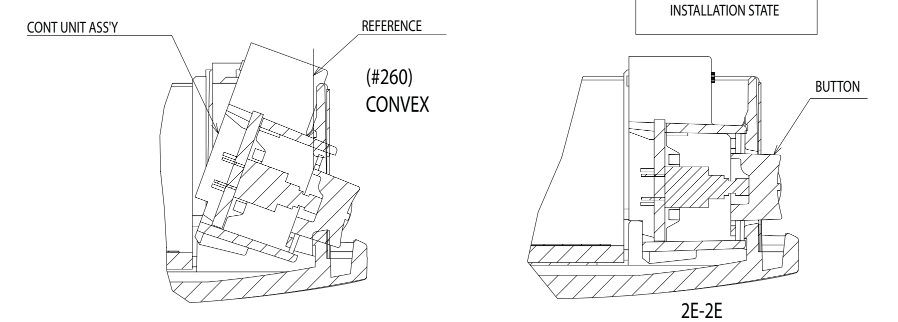
DO NOT RUN ONTO THE BEZEL.
CONT UNIT ASS'Y

2D-2D


CONT UNIT ASS'Y
#200D P50A402/P50A202
#200C P50S602

WORK CAUTION

AFTER HAVING MATCHED CONVEX PART OF (#260)
WITH THE REFERENCE OF THE BEZEL,
IT IS TEMPORARY FIXATION IN THE POSITION
WHERE A BUTTON PART ACCORDS WITH THE HOLE
OF THE BEZEL.


CONT UNIT ASS'Y
REFERENCE
(#260)
CONVEX
INSTALLATION STATE
BUTTON

2E-2E

7.BEZEL ASS'Y-3

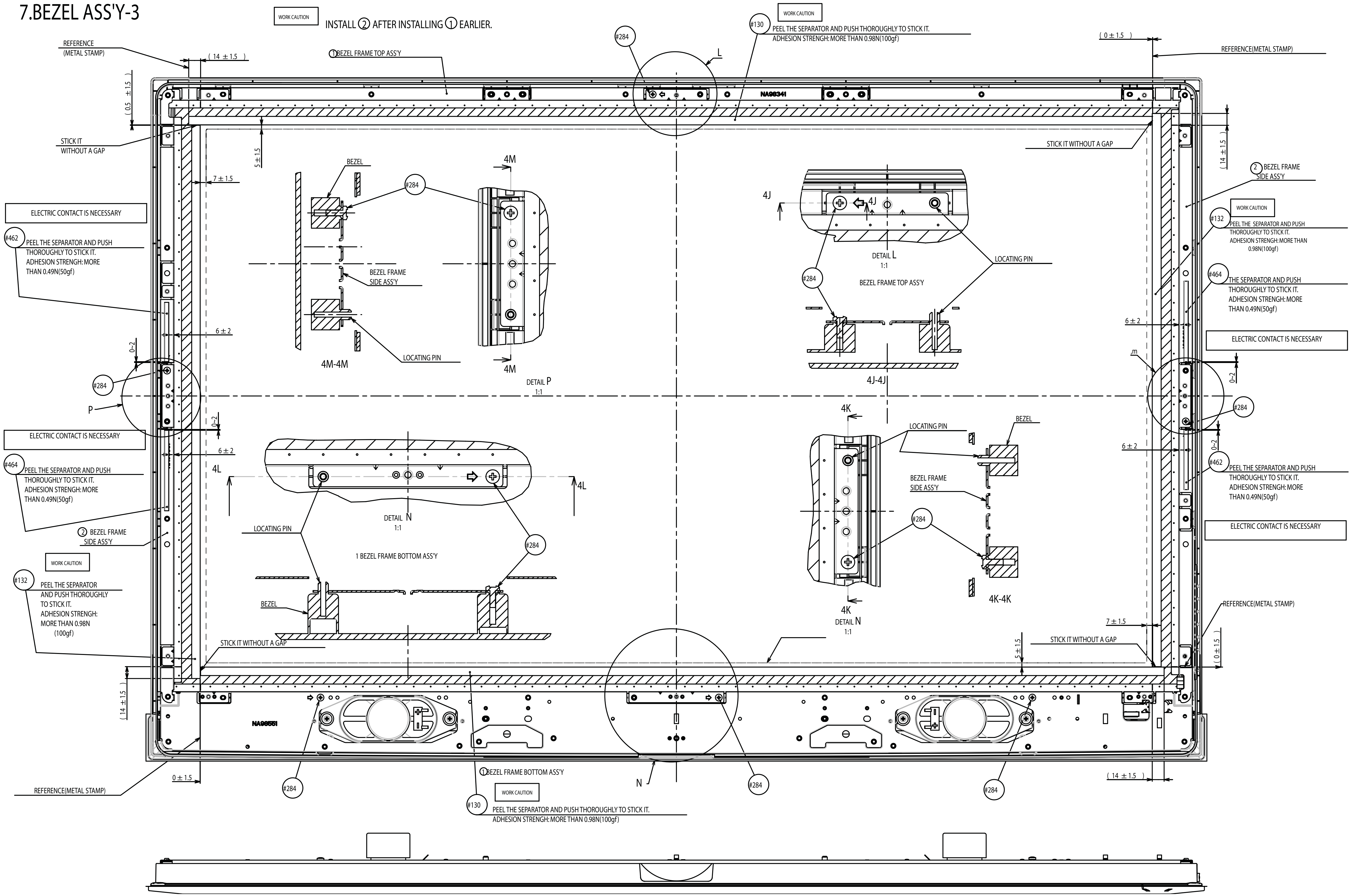
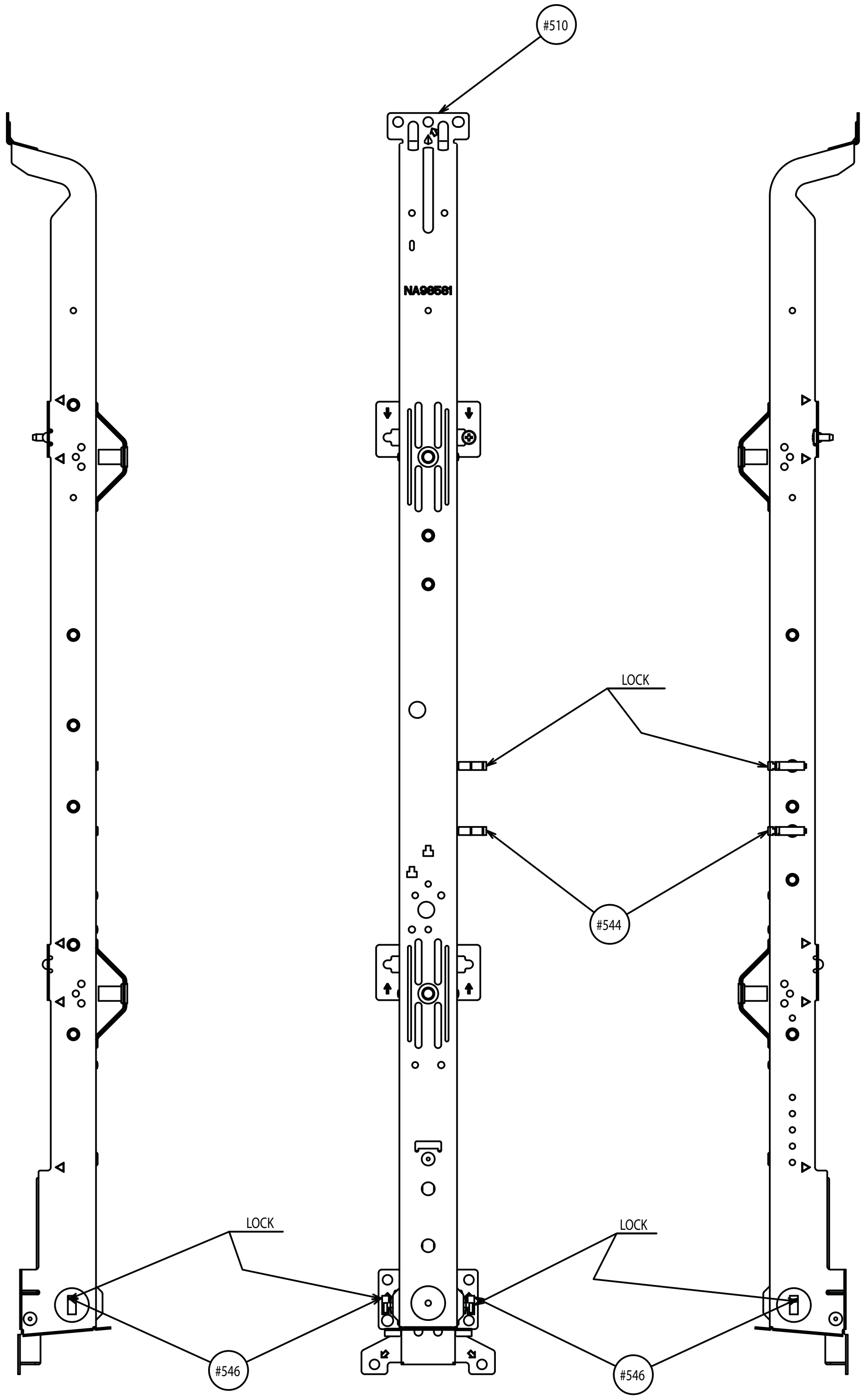
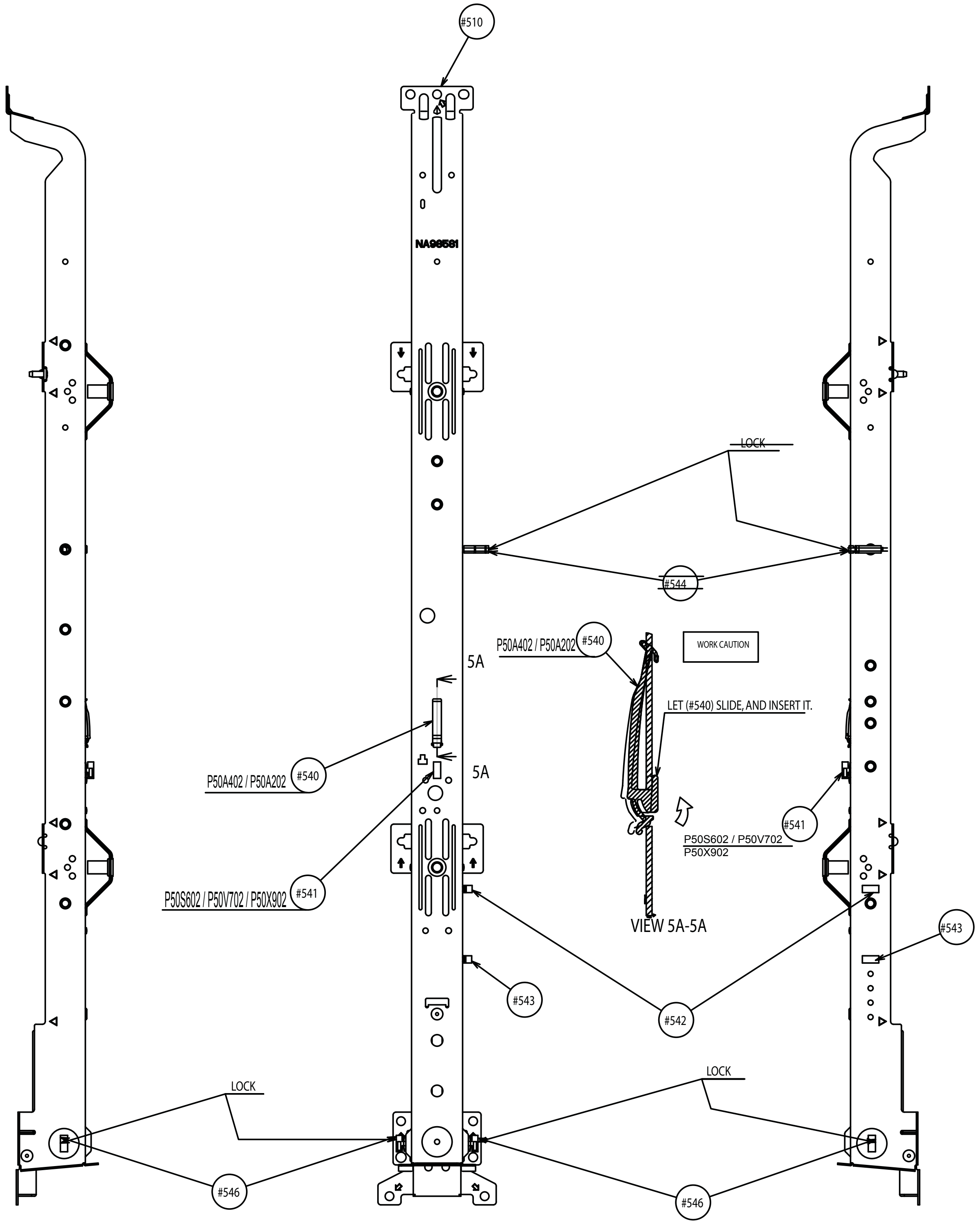

WORK CAUTION
INSTALL ② AFTER INSTALLING ① EARLIER.
REFERENCE (METAL STAMP)
(14 ± 1.5)
(0.5 ± 1.5)
① BEZEL FRAME TOP ASS'Y
#284
L
WORK CAUTION
#130
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.98N(100gf)
(0 ± 1.5)
REFERENCE(METAL STAMP)
NA98341
STICK IT WITHOUT A GAP
5 ± 1.5
7 ± 1.5
STICK IT WITHOUT A GAP
(14 ± 1.5)
② BEZEL FRAME SIDE ASS'Y
WORK CAUTION
#132
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.98N(100gf)
#464
THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)
ELECTRIC CONTACT IS NECESSARY
ELECTRIC CONTACT IS NECESSARY
#462
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)
BEZEL
#284
4M
BEZEL FRAME SIDE ASS'Y
LOCATING PIN
4M-4M
4M
DETAIL P
1:1
4J
4J
DETAIL L
1:1
BEZEL FRAME TOP ASS'Y
LOCATING PIN
#284
4J-4J
6 ± 2
0~2
m
#284
P
6 ± 2
0~2
ELECTRIC CONTACT IS NECESSARY
6 ± 2
#464
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)
4L
4L
DETAIL N
1:1
LOCATING PIN
#284
1 BEZEL FRAME BOTTOM ASS'Y
BEZEL
STICK IT WITHOUT A GAP
② BEZEL FRAME SIDE ASS'Y
WORK CAUTION
#132
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.98N (100gf)
4K
LOCATING PIN
BEZEL
BEZEL FRAME SIDE ASS'Y
#284
4K-4K
4K
DETAIL N
1:1
6 ± 2
0~2
#462
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)
ELECTRIC CONTACT IS NECESSARY
REFERENCE(METAL STAMP)
(0 ± 1.5)
7 ± 1.5
5 ± 1.5
STICK IT WITHOUT A GAP
(14 ± 1.5)
NA98551
REFERENCE(METAL STAMP)
0 ± 1.5
#284
① BEZEL FRAME BOTTOM ASS'Y
WORK CAUTION
#130
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.98N(100gf)
N
#284
#284
(14 ± 1.5)

TABLE OF CONTENTS

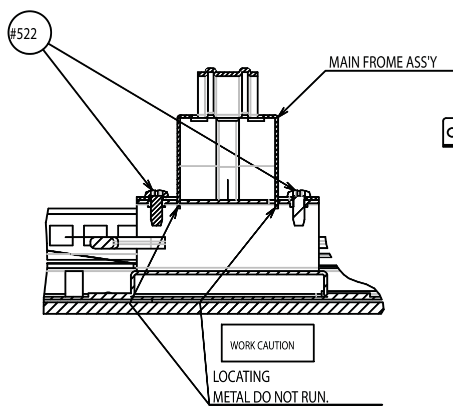
8-1.MAIN FRAME L ASS'Y


#510
NA98581
0
LOCK
#544
LOCK
#546
LOCK
#546

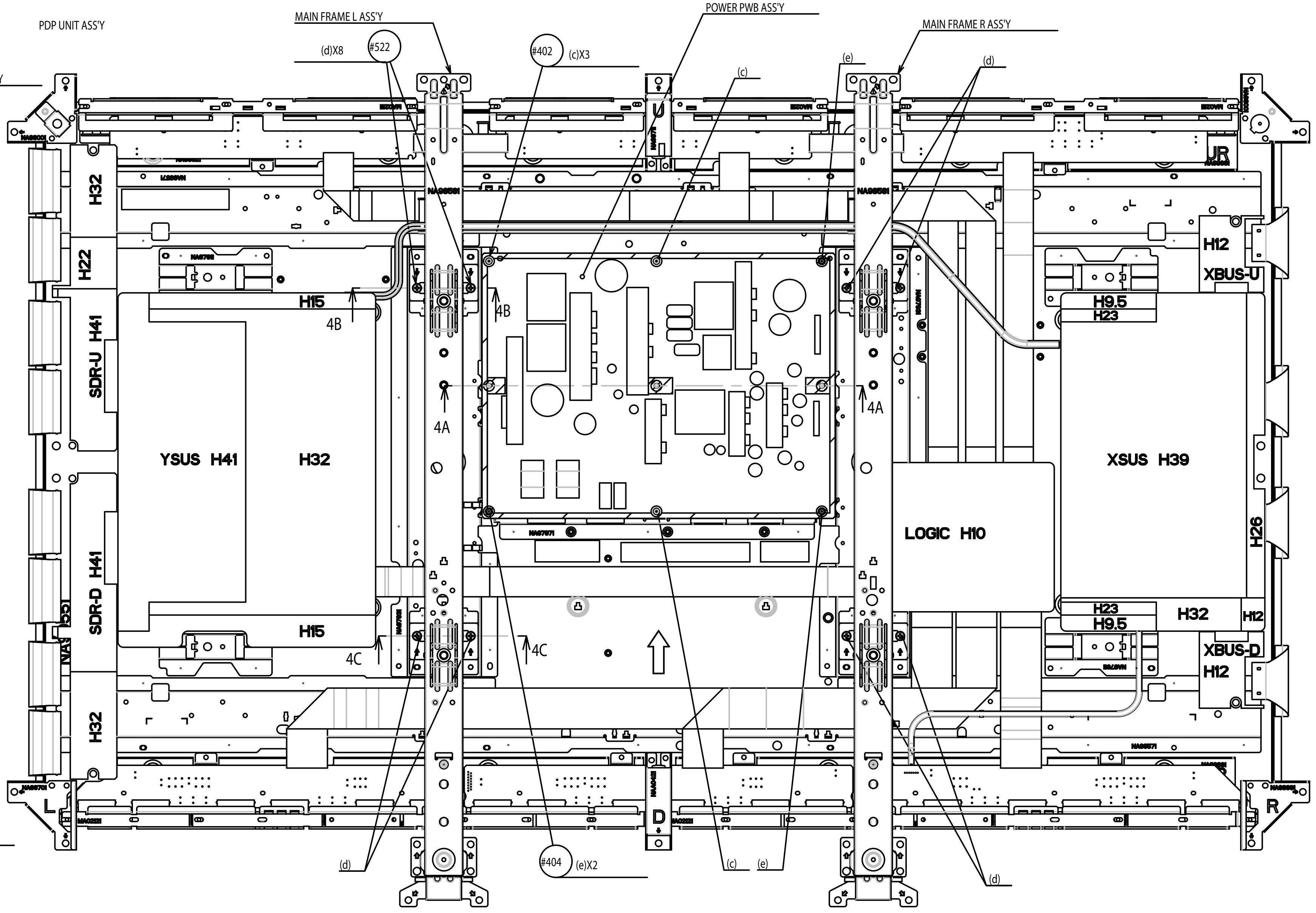
8-2.MAIN FRAME R ASS'Y

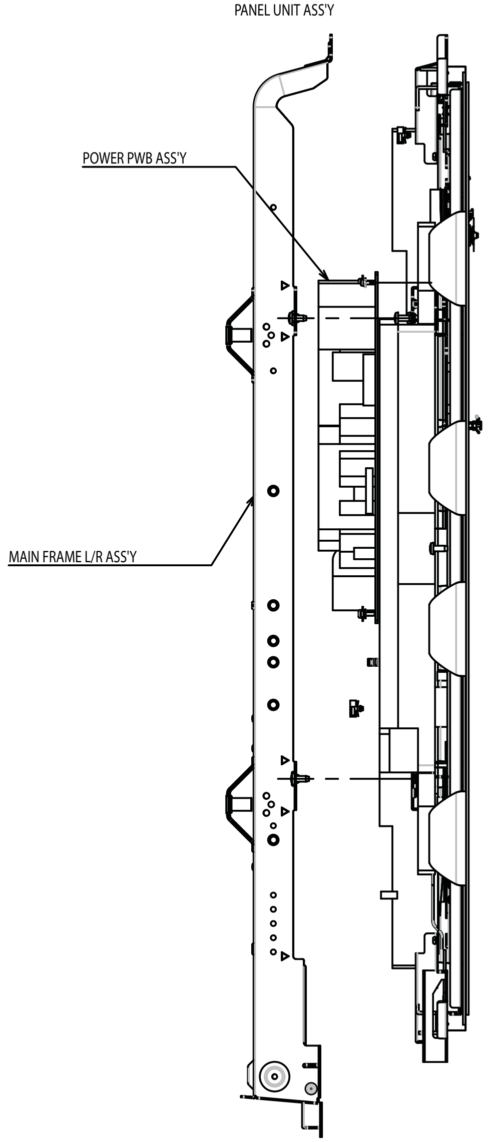

#510
NA98581
0
LOCK
#544
P50A402 / P50A202
#540
WORK CAUTION
5A
LET (#540) SLIDE, AND INSERT IT.
P50A402 / P50A202
#540
5A
#541
P50S602 / P50V702
P50X902
P50S602 / P50V702 / P50X902
#541
VIEW 5A-5A
#543
#543
#542
LOCK
LOCK
#546
#546

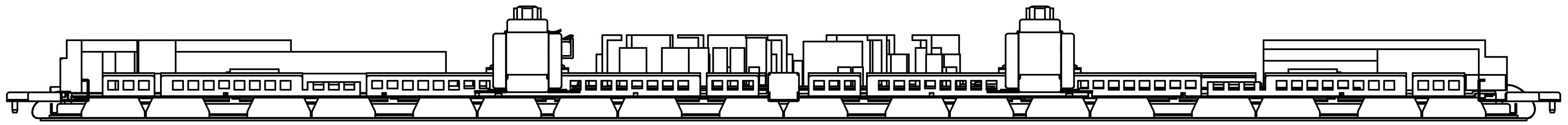
9.PANEL ASS'Y

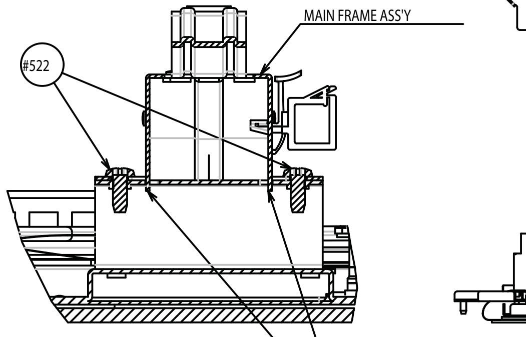

#522
MAIN FROME ASS'Y
WORK CAUTION
LOCATING
METAL DO NOT RUN.

VIEW 4B-4B


PDP UNIT ASS'Y
MAIN FRAME L ASS'Y
(d)X8
#522
#402
(c)X3
POWER PWB ASS'Y
(c)
(e)
MAIN FRAME R ASS'Y
(d)
H32
H22
SDR-U H41
SDR-D H41
H32
H15
4B
4B
4A
4A
YSUS H41
H32
H15
4C
4C
LOGIC H10
XSUS H39
H12
XBUS-U
H9.5
H23
H26
H23
H9.5
H32
H12
XBUS-D
H12
U
D
L
R
(d)
#404
(e)X2
(c)
(e)
(d)


PANEL UNIT ASS'Y
POWER PWB ASS'Y
MAIN FRAME L/R ASS'Y

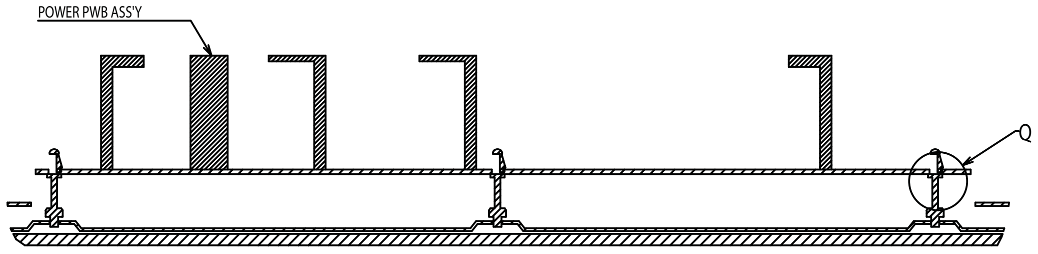



MAIN FRAME ASS'Y
#522

4C-4C

WORK CAUTION

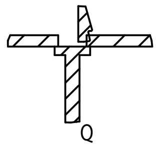
LOCATING
METAL DO NOT RUN.


POWER PWB ASS'Y
Q

4A-4A

WORK CAUTION

FIX "POWER PWB ASS'Y" WITH A CLAMP SURELY.
(3 PLACES)

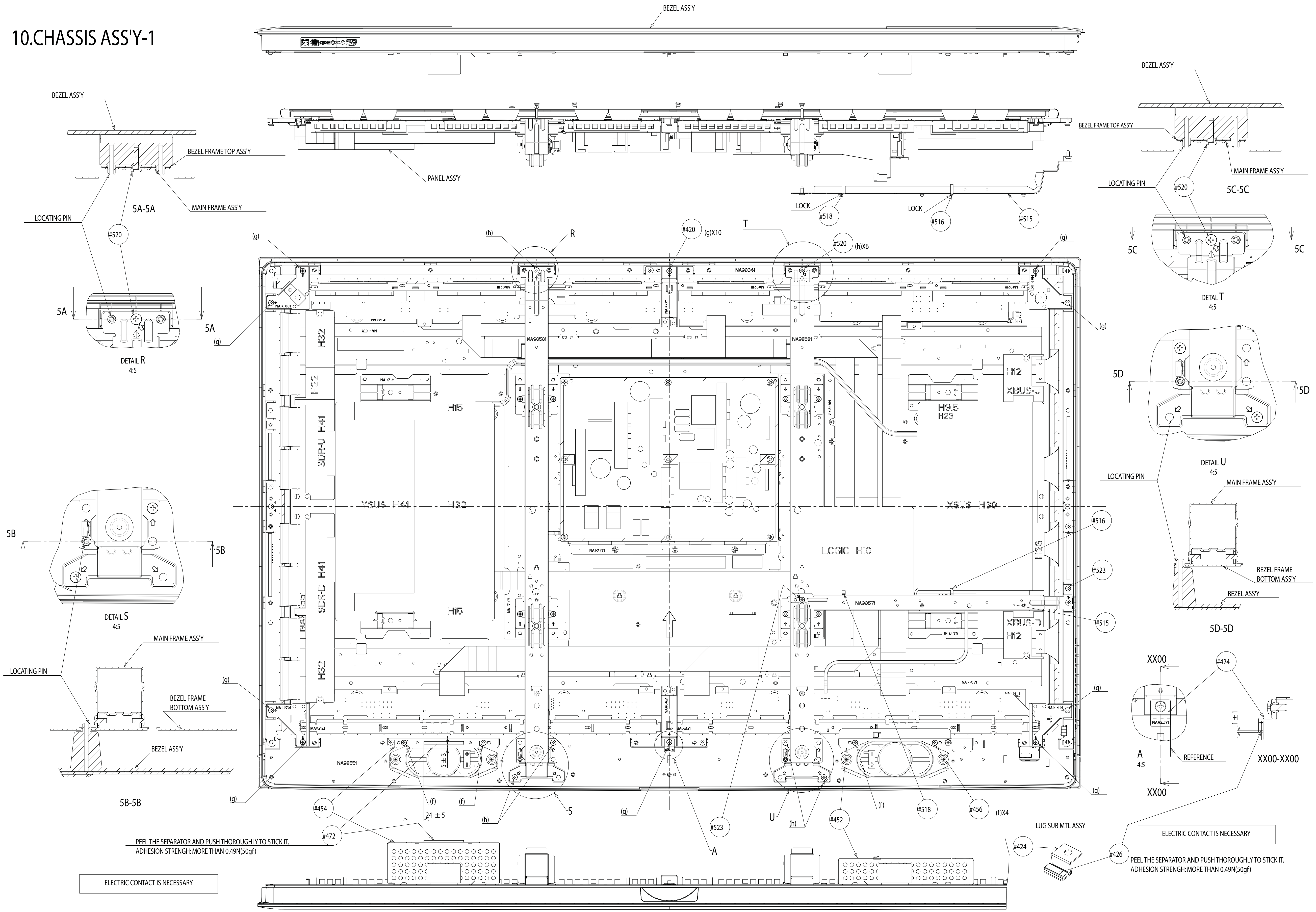


Q
2:1

WORK CAUTION

THE NAIL OF THE CLAMP
COMPLETELY GOING OUT OF
THE INSTALLATION HOLE OF
"POWER PWB ASS'Y".

10.CHASSIS ASS'Y-1


BEZEL ASS'Y
BEZEL ASS'Y
BEZEL FRAME TOP ASS'Y
PANEL ASS'Y
MAIN FRAME ASS'Y
5A-5A
LOCATING PIN
#520
5A
5A
(g)
DETAIL R
4:5
LOCK
LOCK
#518
#516
#515
#420
(g)X10
T
#520
(h)X6
(h)
R
(g)
BEZEL ASS'Y
BEZEL FRAME TOP ASS'Y
MAIN FRAME ASS'Y
LOCATING PIN
#520
5C-5C
5C
5C
DETAIL T
4:5
5D
5D
DETAIL U
4:5
LOCATING PIN
MAIN FRAME ASS'Y
BEZEL FRAME BOTTOM ASS'Y
BEZEL ASS'Y
5D-5D
5B
5B
DETAIL S
4:5
MAIN FRAME ASS'Y
LOCATING PIN
BEZEL FRAME BOTTOM ASS'Y
BEZEL ASS'Y
5B-5B
(g)
(g)
H32
H22
H15
SDR-U H41
YSUS H41
H32
SDR-D H41
H15
H32
H12
XBUS-U
H9.5
H23
XSUS H39
LOGIC H10
H26
XBUS-D
H12
#516
#523
#515
(g)
(g)
XX00
#424
A
4:5
REFERENCE
1±1
XX00-XX00
XX00
5±3
24 ± 5
(f)
(f)
#454
#472
(h)
S
(g)
#523
A
U
(h)
#452
(f)
#518
#456
(f)X4
LUG SUB MTL ASSY
#424
#426

PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

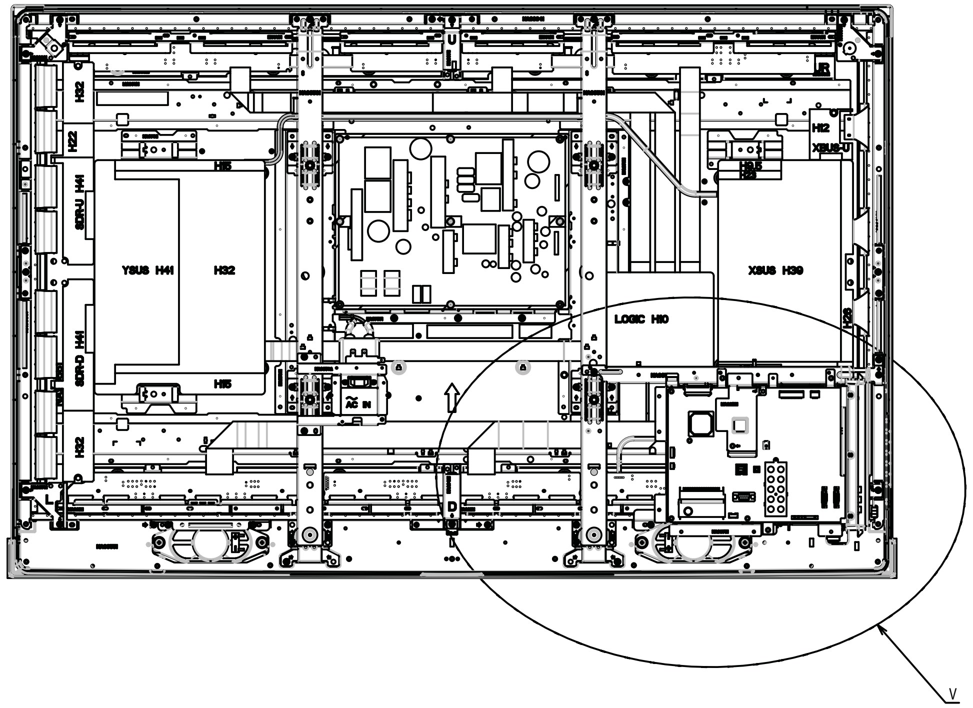
ELECTRIC CONTACT IS NECESSARY

ELECTRIC CONTACT IS NECESSARY

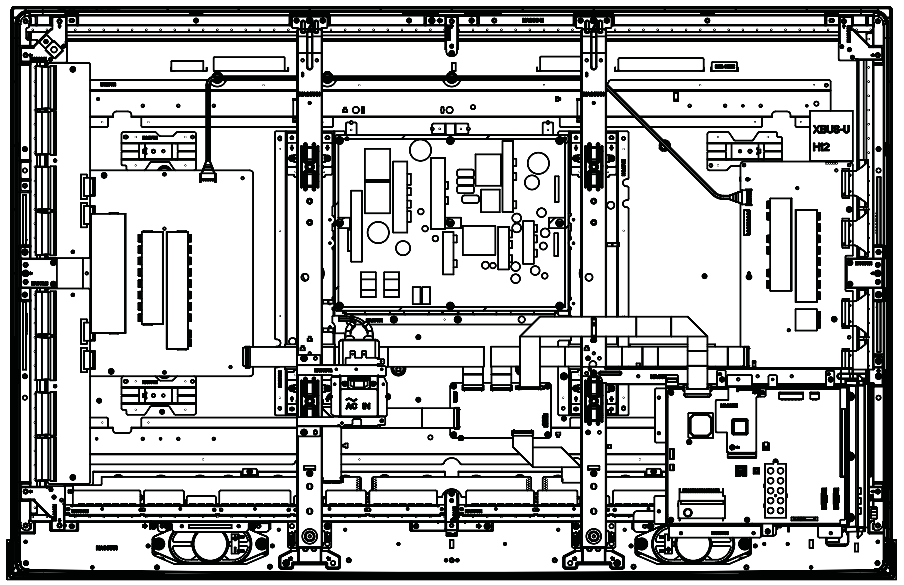
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

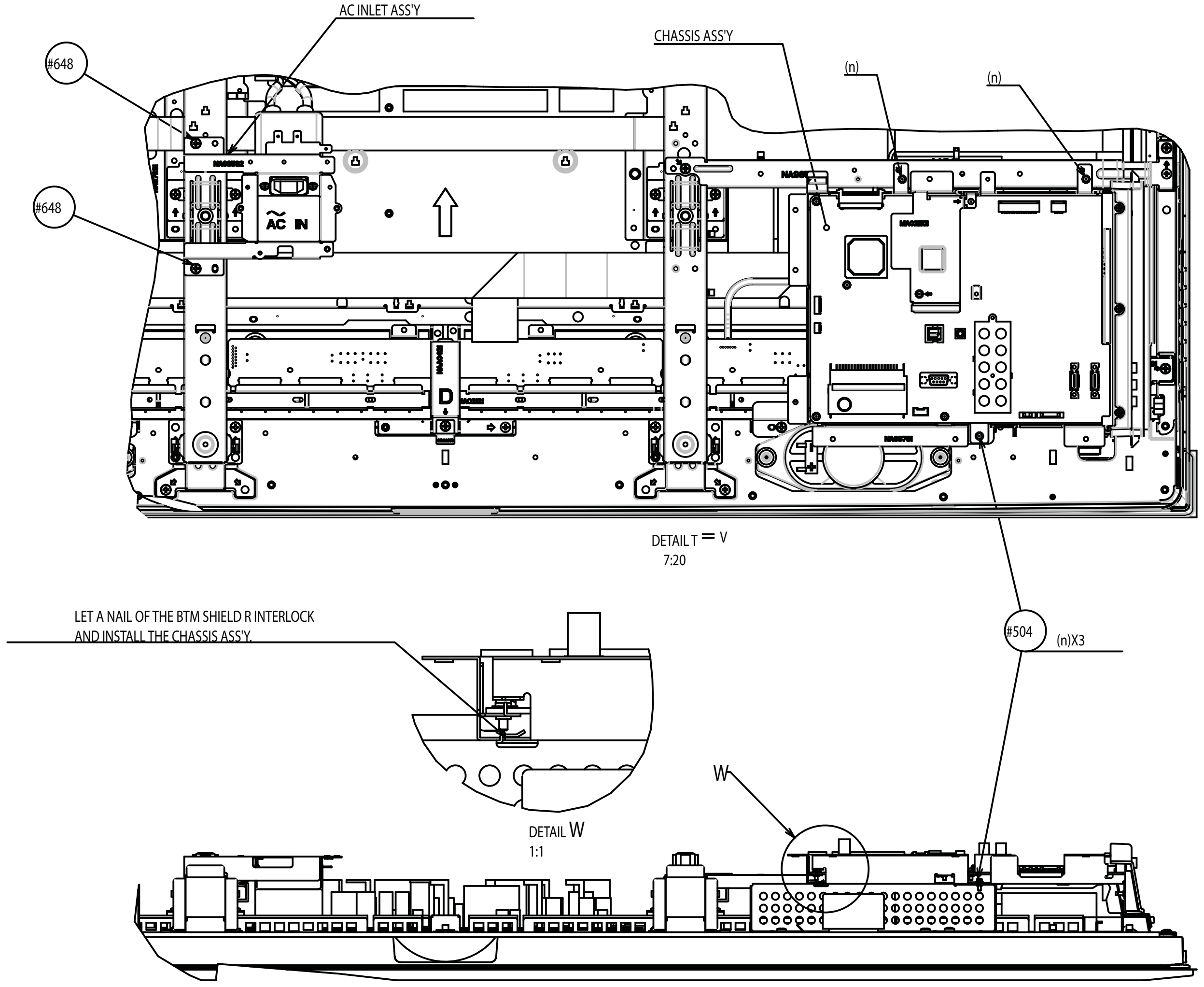
12.CHASSIS ASS'Y-2

P50S602

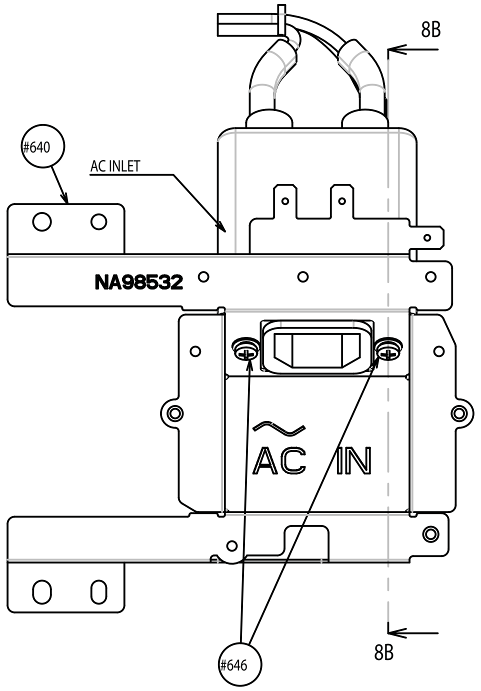

H32
H22
H44
H41
H35
YSUS H44
H32
XSUS H39
H12
XSUS-U
LOGIC H10
H15
V

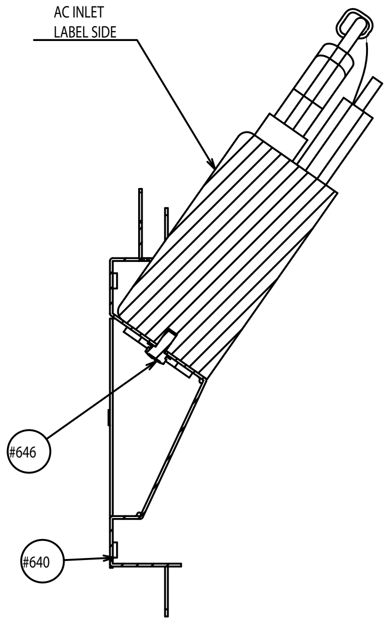
P50A402, P50A202




AC INLET ASS'Y
CHASSIS ASS'Y
(n)
(n)
#648
#648
AC IN
D
DETAIL T = V
7:20
LET A NAIL OF THE BTM SHIELD R INTERLOCK AND INSTALL THE CHASSIS ASS'Y.
#504
(n)X3
W
DETAIL W
1:1

11.AC INLET ASS'Y

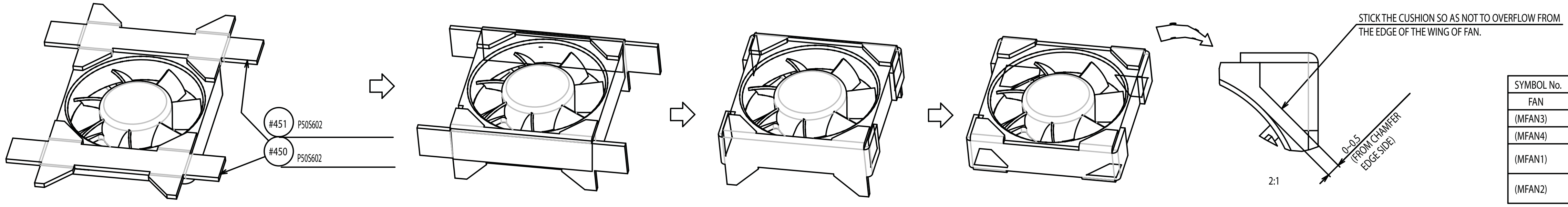

8B
#640
AC INLET
NA98532
AC IN
#646
8B


AC INLET
LABEL SIDE
#646
#640

8B-8B

13.FAN CUSHION ASS'Y

FAN CUSHION ADHESION WORK PROCESS


#451
P50S602
#450
P50S602
STICK THE CUSHION SO AS NOT TO OVERFLOW FROM THE EDGE OF THE WING OF FAN.
0~0.5
(FROM CHAMFER EDGE SIDE)
2:1

1. STICK THE UPPER PART

2. STICK THE SIDE PART

3. STICK THE LEFT AND RIGHT PART

4. STICK THE BOTTOM PART

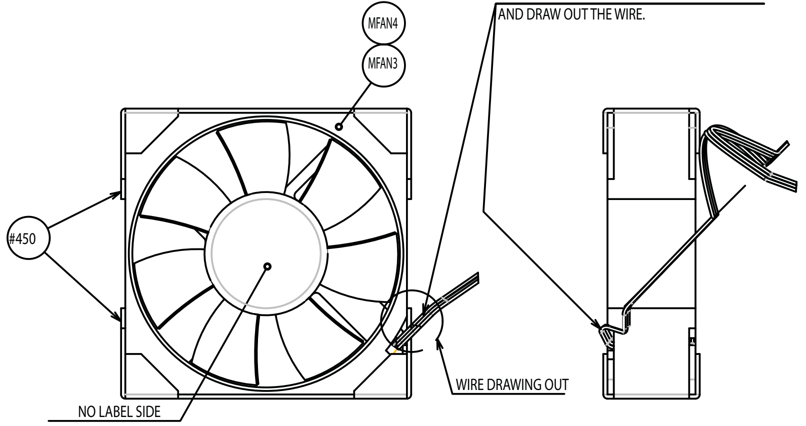
SYMBOL No.		WORK	ASS'Y
FAN	CUSHION		
(MFAN3) (MFAN4)	(#450)	P50S602	FAN ASS'Y 1A
(MFAN1)	(#451)	P50S602	FAN ASS'Y R
(MFAN2)	(#451)	P50S602	FAN ASS'Y L

FAN ASS'Y 1A

P50S602 ONLY

WORK CAUTION

TURN FROM THE INSIDE OF THE CUSHION AND DRAW OUT THE WIRE.

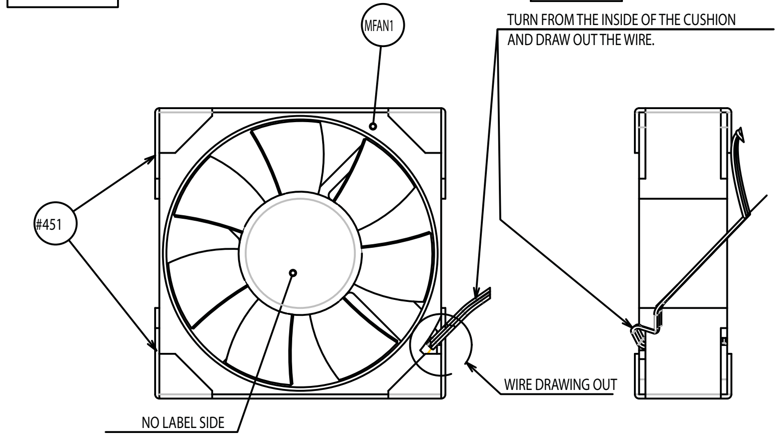

MFAN4
MFAN3
#450
WIRE DRAWING OUT
NO LABEL SIDE

FAN ASS'Y R

P50S602 ONLY

WORK CAUTION

TURN FROM THE INSIDE OF THE CUSHION AND DRAW OUT THE WIRE.

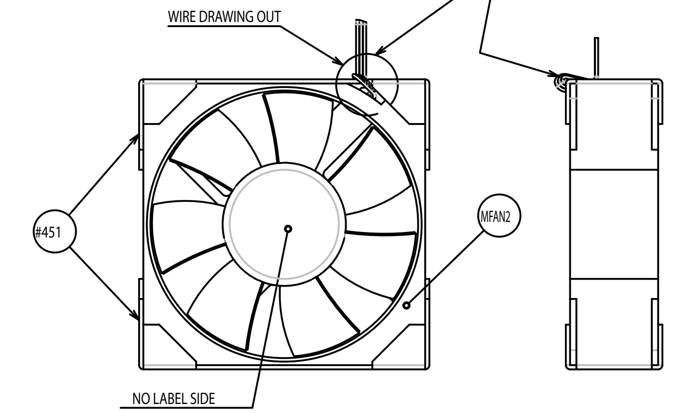

MFAN1
#451
WIRE DRAWING OUT
NO LABEL SIDE

FAN ASS'Y L

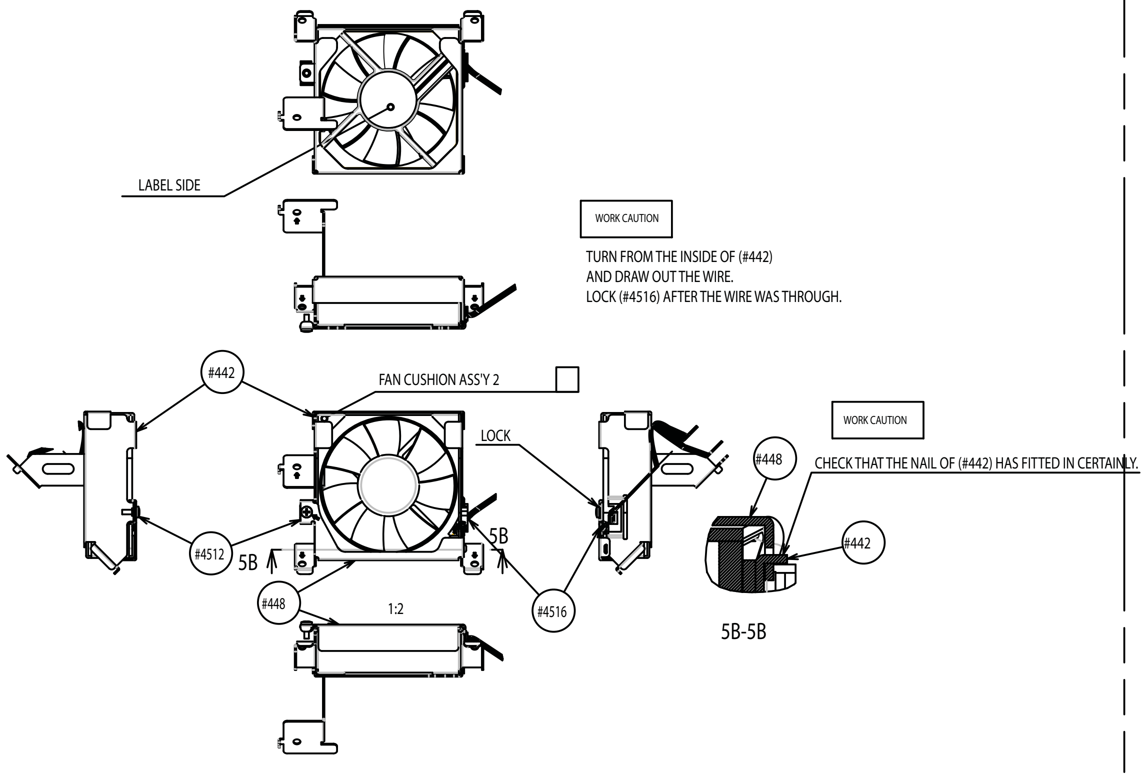
P50S602 ONLY

WORK CAUTION

TURN FROM THE INSIDE OF THE CUSHION AND DRAW OUT THE WIRE.


WIRE DRAWING OUT
#451
MFAN2
NO LABEL SIDE

14-1.FAN ASS'Y R P50S602 ONLY


LABEL SIDE
#442
FAN CUSHION ASS'Y 2
LOCK
#448
#442
#4512
5B
5B
#448
1:2
#4516
5B-5B

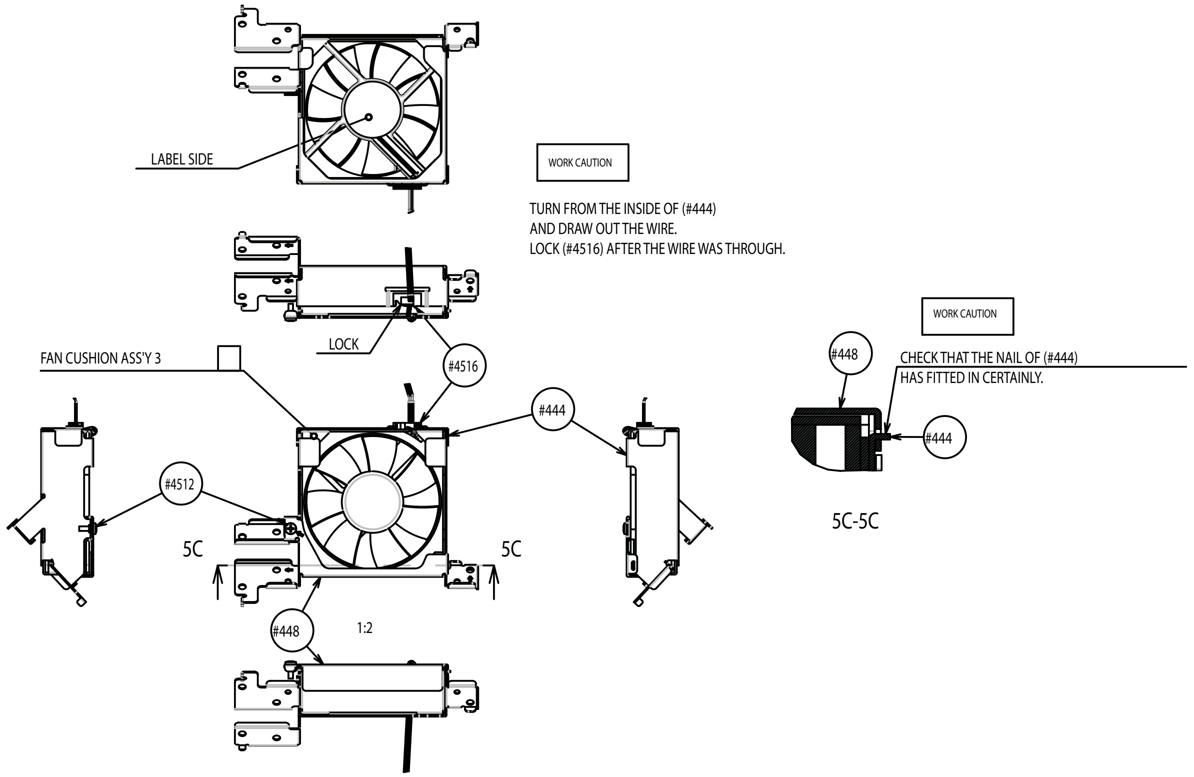
WORK CAUTION

TURN FROM THE INSIDE OF (#442) AND DRAW OUT THE WIRE.
LOCK (#4516) AFTER THE WIRE WAS THROUGH.

WORK CAUTION

CHECK THAT THE NAIL OF (#442) HAS FITTED IN CERTAINLY.

14-2.FAN ASS'Y L P50S602 ONLY


LABEL SIDE
LOCK
FAN CUSHION ASS'Y 3
#4516
#444
#4512
5C
5C
#448
1:2
#448
#444
5C-5C

WORK CAUTION

TURN FROM THE INSIDE OF (#444) AND DRAW OUT THE WIRE.
LOCK (#4516) AFTER THE WIRE WAS THROUGH.

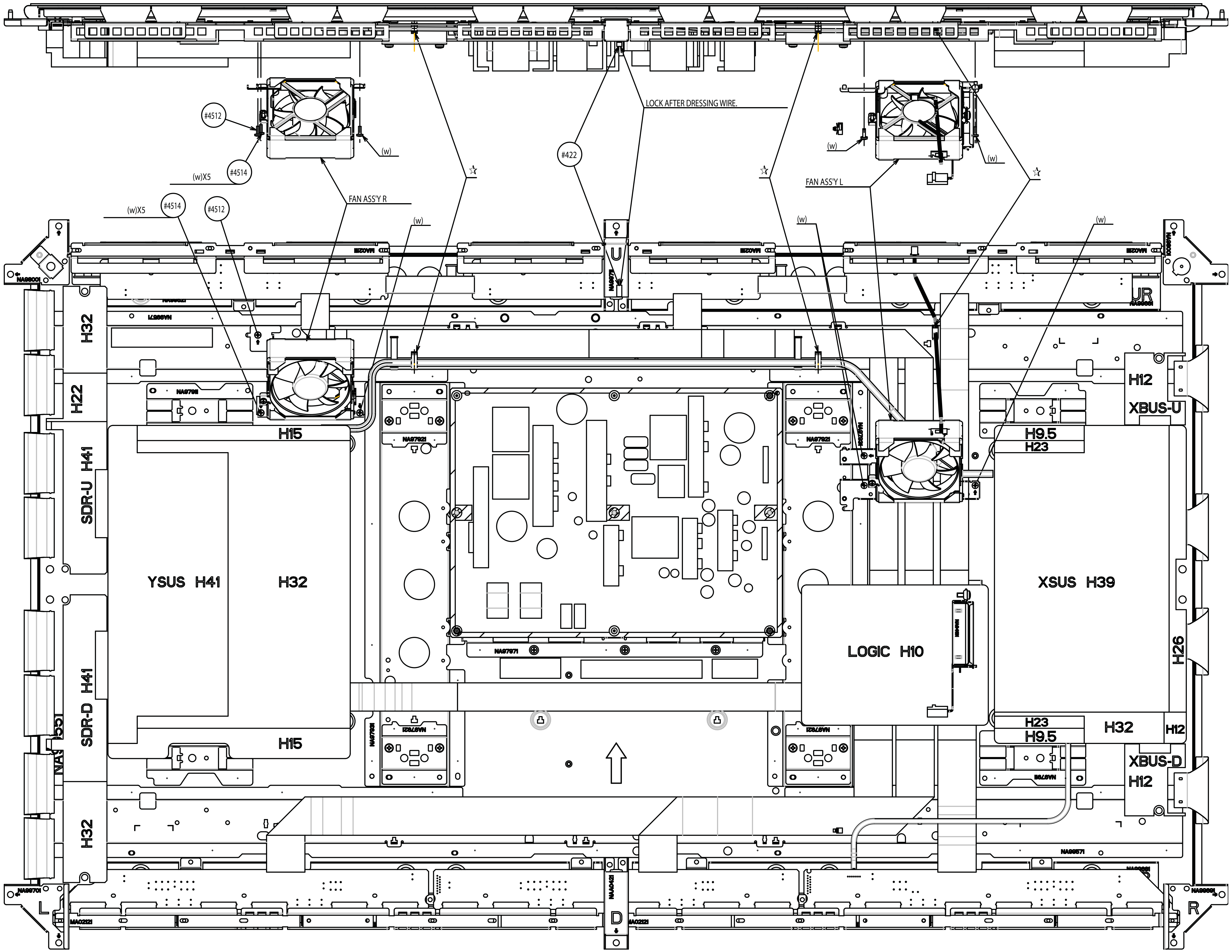
WORK CAUTION

CHECK THAT THE NAIL OF (#444) HAS FITTED IN CERTAINLY.

15.FAN ASS'Y S-1 P50S602 ONLY

WORK CAUTION

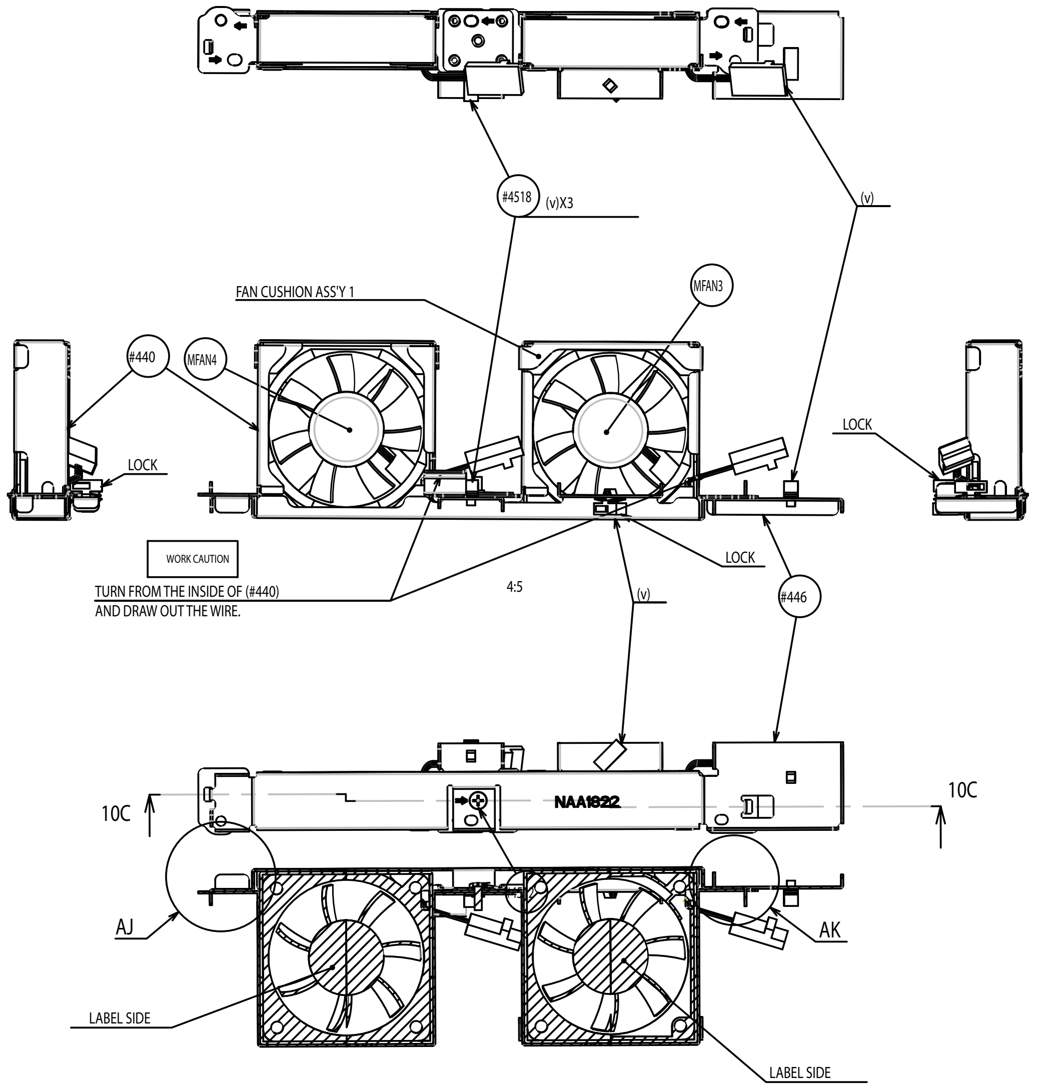
☆ REMOVE THE LOCK TO CLAMPING (#422)
WHEN YOU INSTALL FAN.
LOCK AGAIN AFTER DRESSING WIRE.
DETAILS DEPEND ON WIRE DRESSING DRAWING.


#4512
(w)
(w)X5
#4514
(w)X5
#4514
#4512
FAN ASS'Y R
(w)
☆
#422
LOCK AFTER DRESSING WIRE.
☆
FAN ASS'Y L
(w)
(w)
(w)
☆
(w)
U
JR
H32
H22
SDR-U H41
SDR-D H41
H32
H15
YSUS H41
H32
H15
LOGIC H10
XSUS H39
H12
XBUS-U
H9.5
H23
H26
H23
H9.5
H32
H12
XBUS-D
H12
L
D
R

1:2

16-1.FAN ASS'Y 1A

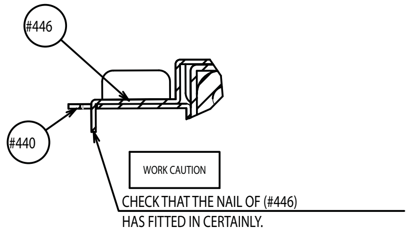
P50S602 ONLY


#4518
(v)X3
(v)
MFAN3
FAN CUSHION ASS'Y 1
#440
MFAN4
LOCK
LOCK
LOCK
4:5
(v)
#446
NAA1822
10C
10C
AJ
AK
LABEL SIDE
LABEL SIDE

WORK CAUTION

TURN FROM THE INSIDE OF (#440) AND DRAW OUT THE WIRE.

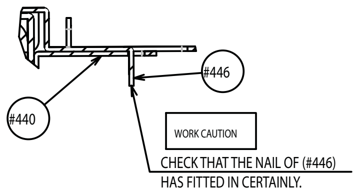
10C-10C



WORK CAUTION

CHECK THAT THE NAIL OF (#446) HAS FITTED IN CERTAINLY.

DETAIL AJ
8:5



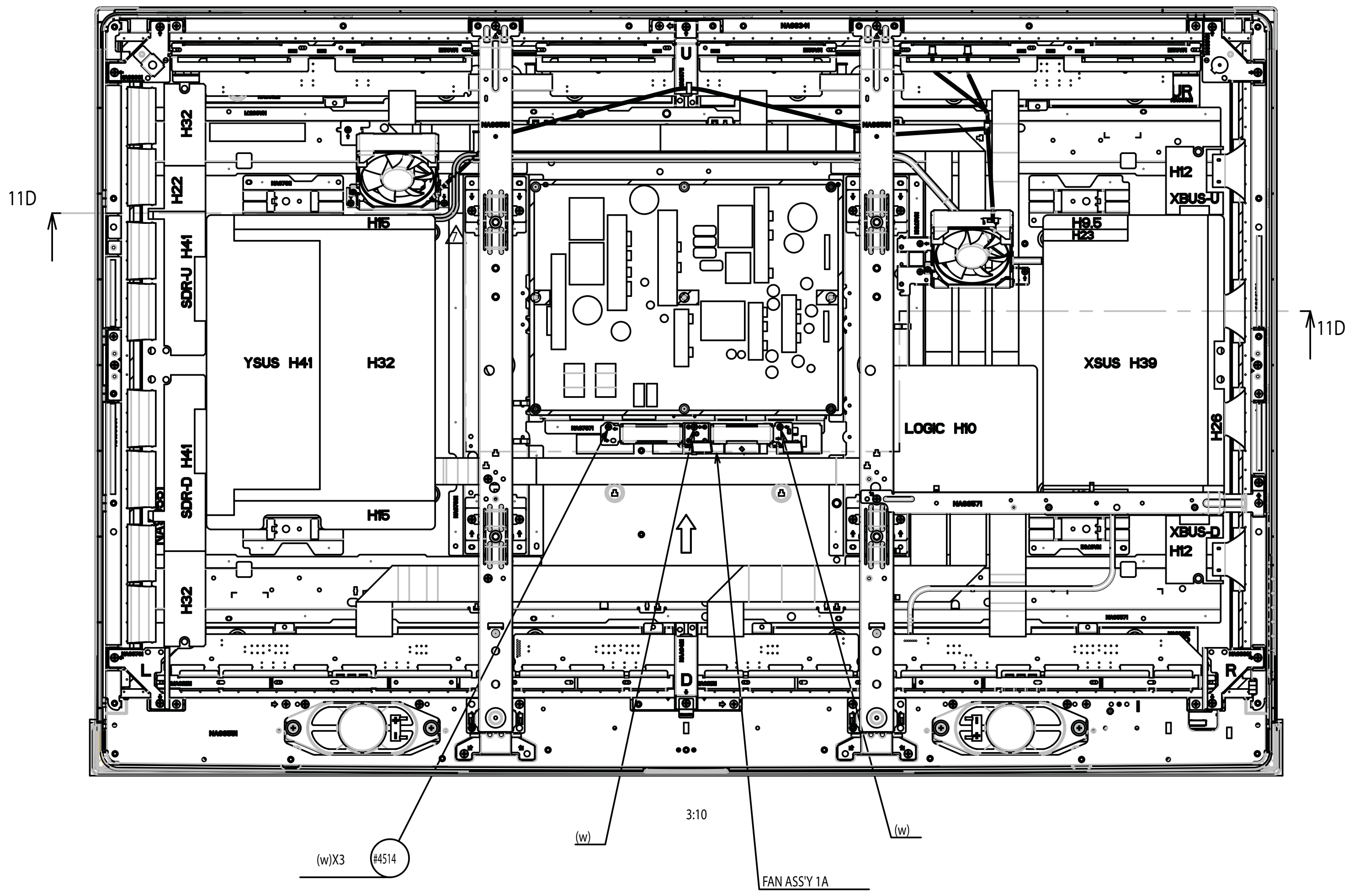
WORK CAUTION

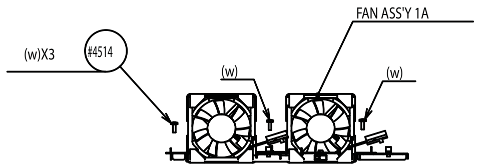
CHECK THAT THE NAIL OF (#446) HAS FITTED IN CERTAINLY.

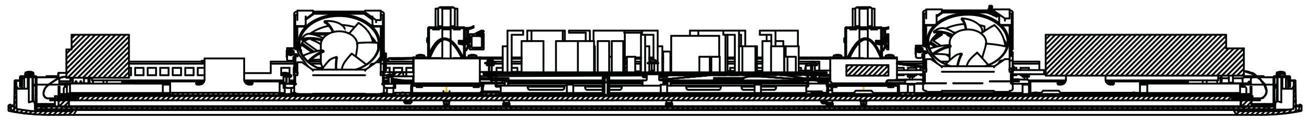
DETAIL AK
8:5

17.FAN ASS'Y S-2

P50S602 ONLY


11D
11D
H32
H22
SDR-U H41
H15
YSUS H41
H32
SDR-D H41
H15
H32
U
D
L
R
H12
XBUS-U
H9.5
H23
XSUS H39
LOGIC H10
H26
XBUS-D
H12
3:10
(w)X3
#4514
(w)
FAN ASS'Y 1A
(w)

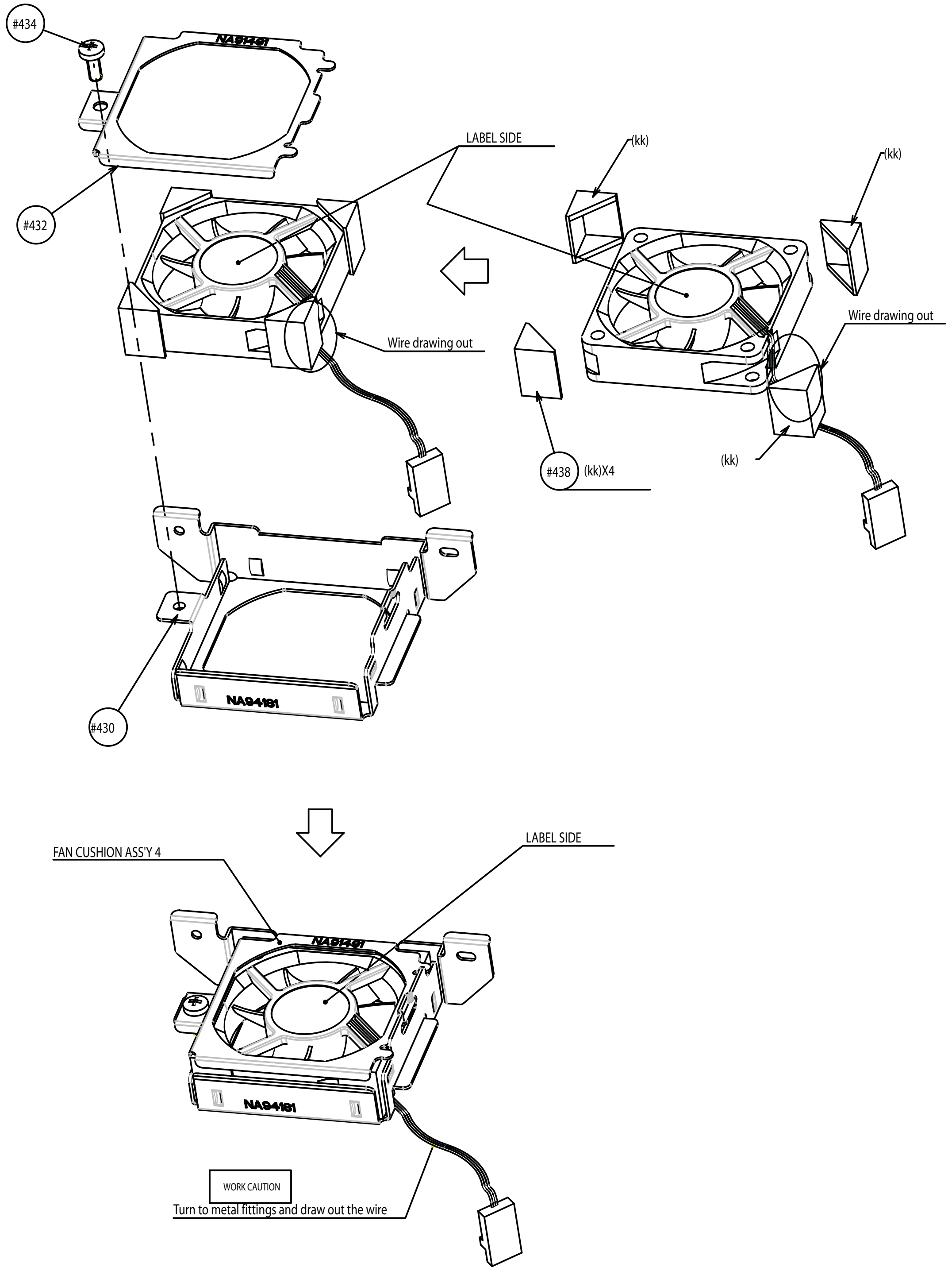

FAN ASS'Y 1A
(w)X3
#4514
(w)
(w)



11D-11D

18-1.FAN ASS'Y 1B

P50A402, P50A202 ONLY

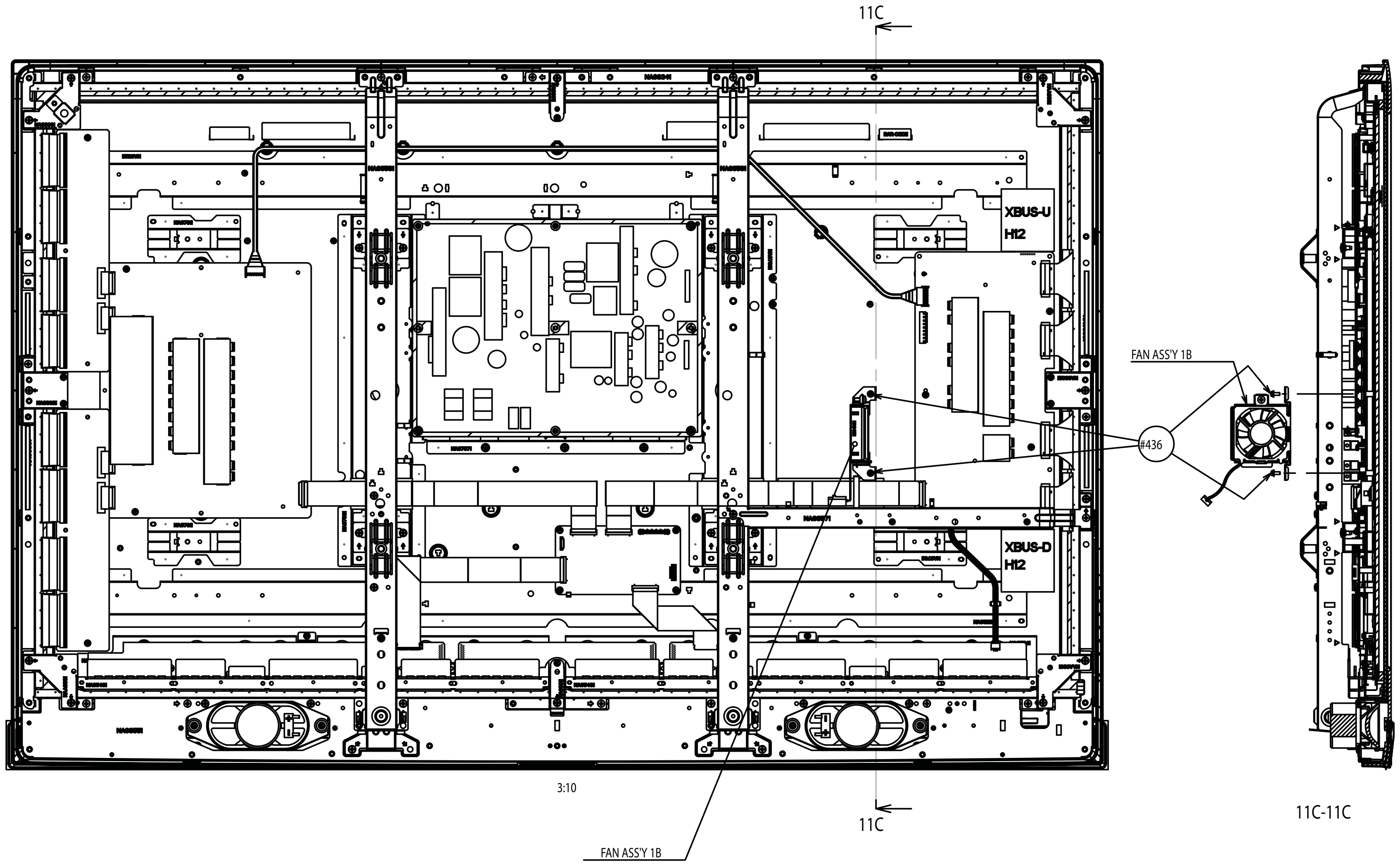

#434
NA94181
#432
LABEL SIDE
(kk)
(kk)
Wire drawing out
Wire drawing out
#438
(kk)X4
(kk)
#430
NA94181
FAN CUSHION ASS'Y 4
LABEL SIDE
NA94181
NA94181

WORK CAUTION

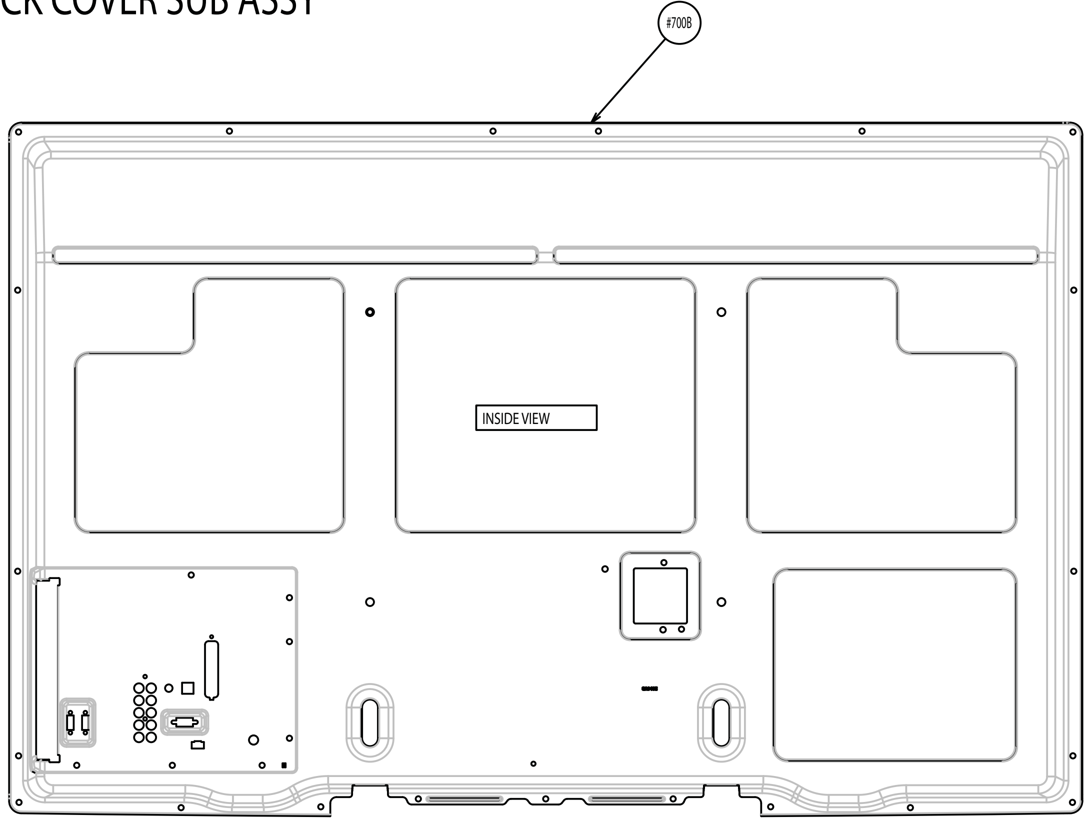
Turn to metal fittings and draw out the wire

19.FAN ASS'Y A

P50A402, P50A202 ONLY

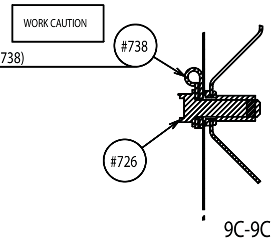

11C
XBUS-U
H12
XBUS-D
H12
FAN ASS'Y 1B
#436
3:10
11C
FAN ASS'Y 1B
11C-11C

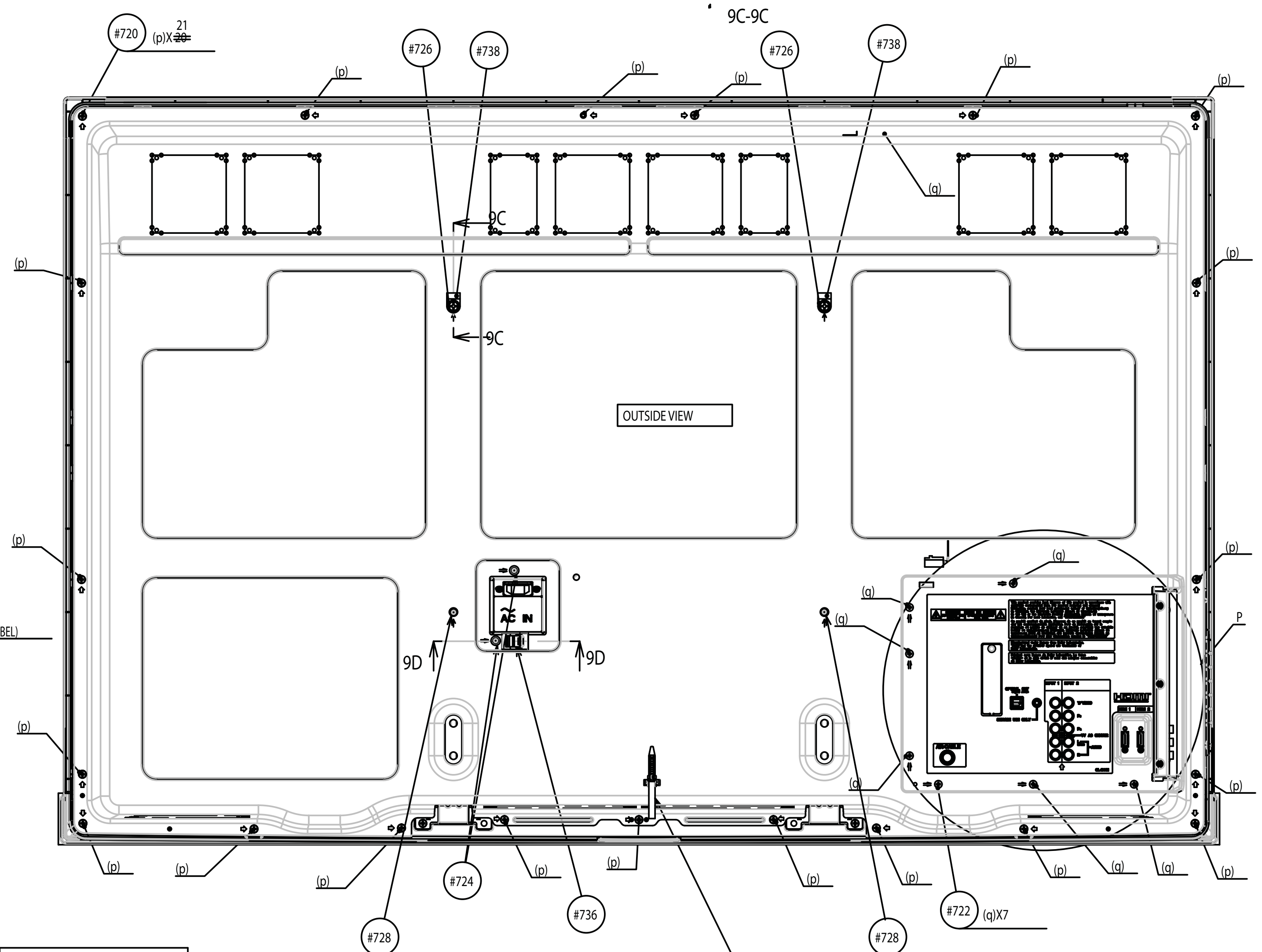
20.BACK COVER SUB ASSY

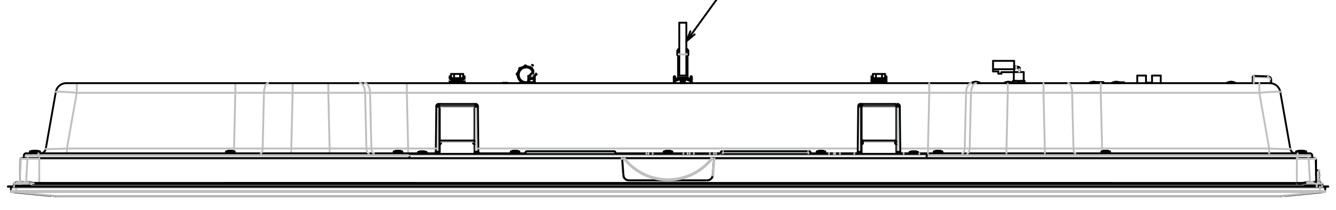

#700B
INSIDE VIEW

20-3 ,BACK COVER ASSY

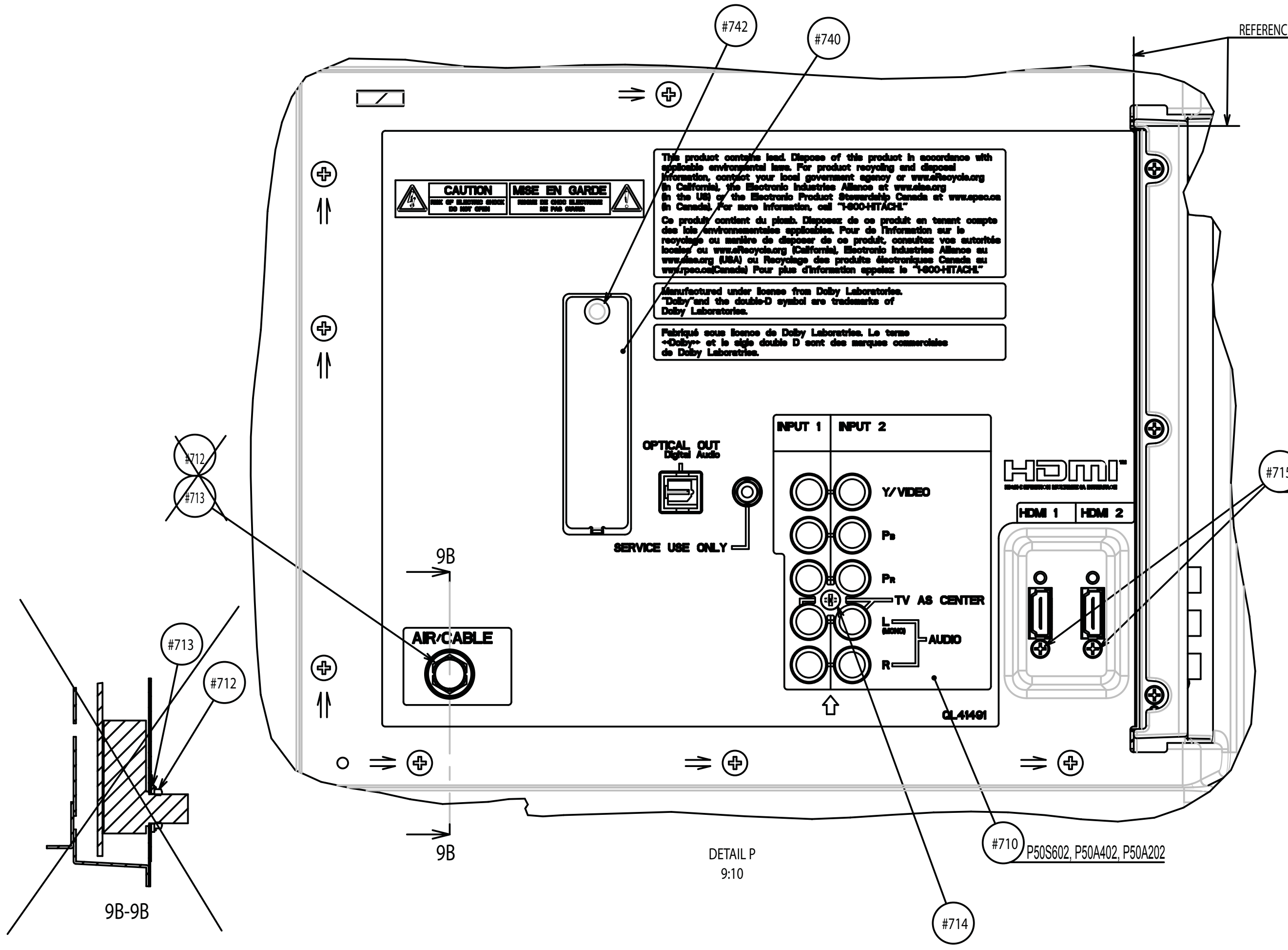
ONLY P50S602, P50A402, P50A202


WORK CAUTION
INSTALLED CABLE CLAMP (#738)
ON THIS DIRECTION.
#738
#726
9C-9C


#720
(p)X ~~20~~ 21
#726
#738
#726
#738
(p)
(p)
(p)
(p)
(p)
(q)
9C
9C
OUTSIDE VIEW
AC IN
9D
9D
(q)
(q)
(q)
P
(p)
(p)
(p)
(p)
(p)
(p)
(p)
(p)
(p)
(p)
(q)
(q)
(p)
#724
#728
#736
#728
#722
(q)X7
#730



WORK CAUTION


#742
#740
REFERENCE(LABEL)
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
MISE EN GARDE
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR
This product contains lead. Dispose of this product in accordance with applicable environmental laws. For product recycling and disposal information, contact your local government agency or www.eRecycle.org (in California), the Electronic Industries Alliance at www.eiae.org (in the US) or the Electronic Product Stewardship Canada at www.epsc.ca (in Canada). For more information, call "1-800-HITACHI."
Ce produit contient du plomb. Disposez de ce produit en tenant compte des lois environnementales applicables. Pour de l'information sur le recyclage ou manière de disposer de ce produit, consultez vos autorités locales ou www.eRecycle.org (California), Electronic Industries Alliance au www.eiae.org (USA) ou Recyclage des produits électroniques Canada au www.rpec.ca(Canada) Pour plus d'information appelez le "1-800-HITACHI."
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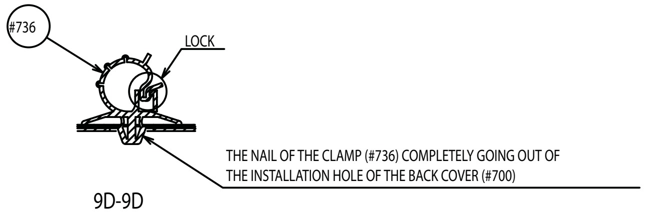
INPUT 1
INPUT 2
OPTICAL OUT
Digital Audio
SERVICE USE ONLY
Y/VIDEO
P_B
P_R
TV AS CENTER
L (MONO)
AUDIO
R
HDMI
HDMI 1
HDMI 2
AIR/CABLE
QL41491
#712
#713
9B
9B
#713
#712
9B-9B
#714
#710

#715 *TIGHTEN THIS SCREW FIRST.

DETAIL P
9:10

#710 P50S602, P50A402, P50A202

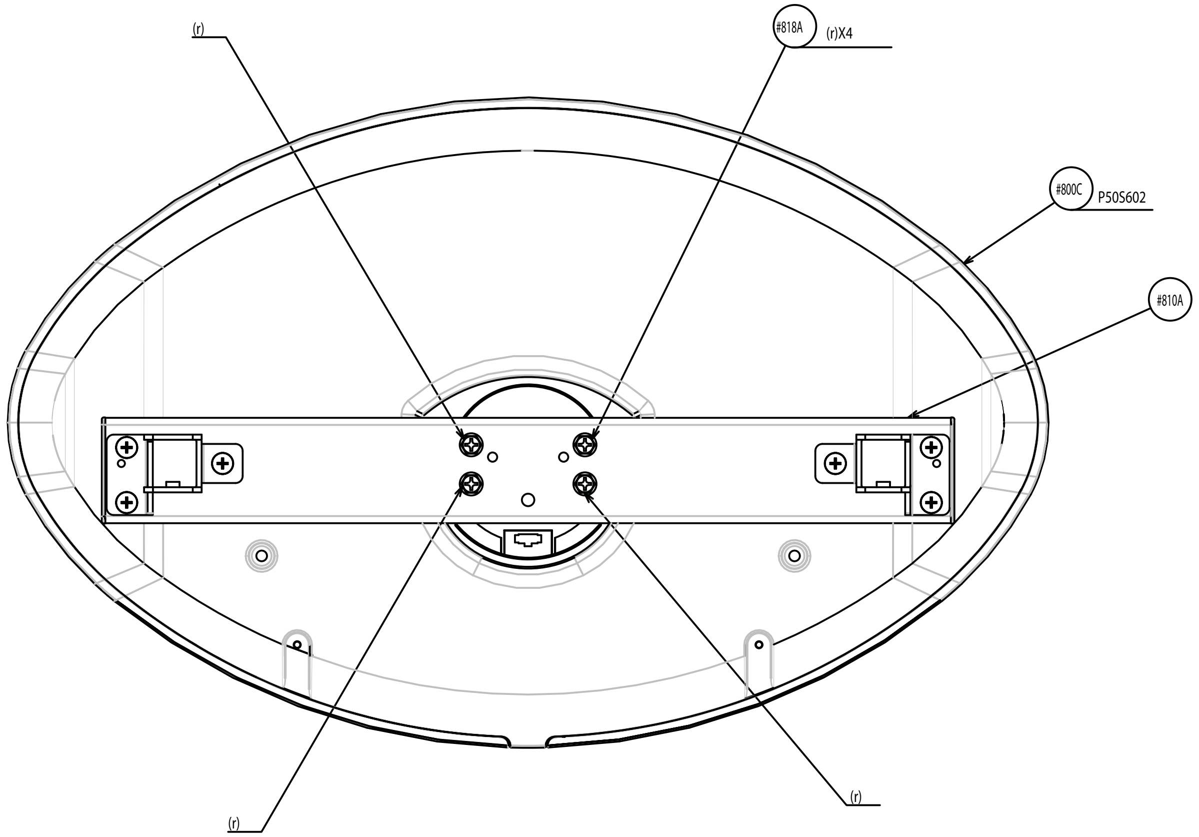


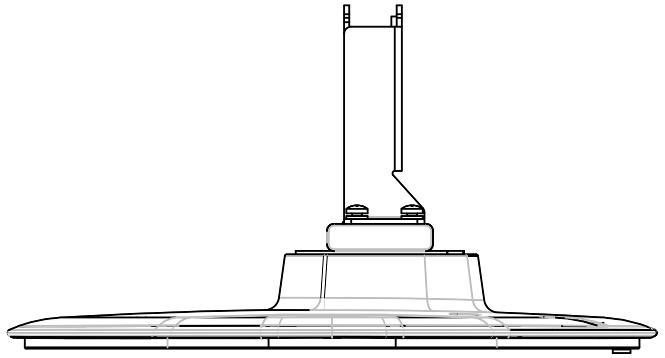
THE NAIL OF THE CLAMP (#736) COMPLETELY GOING OUT OF
THE INSTALLATION HOLE OF THE BACK COVER (#700)

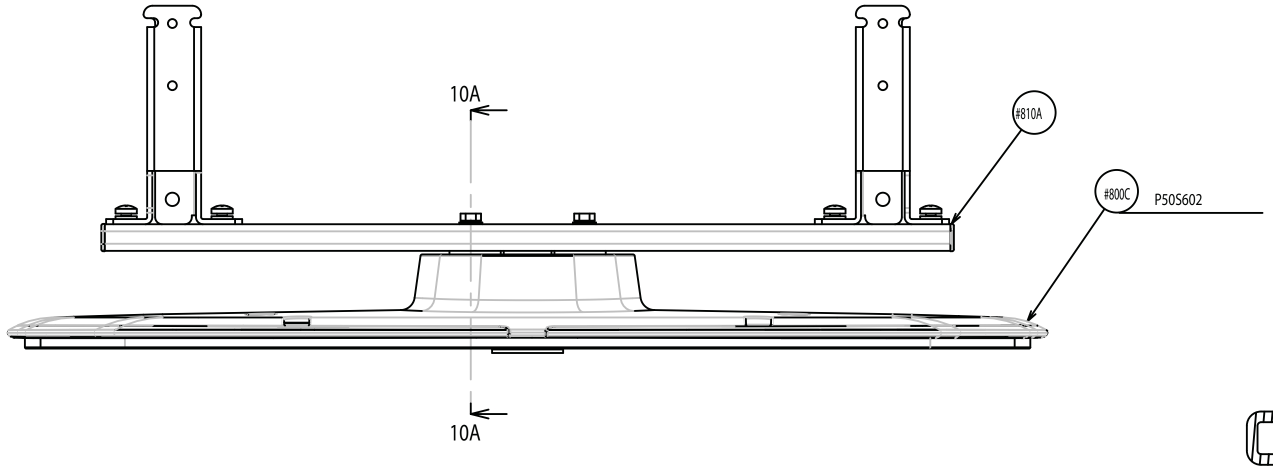
9D-9D

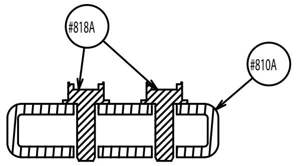
21-1. STAND ASS'Y

ONLY P50S602


(r)
#818A
(r)X4
#800C
P50S602
#810A
(r)
(r)



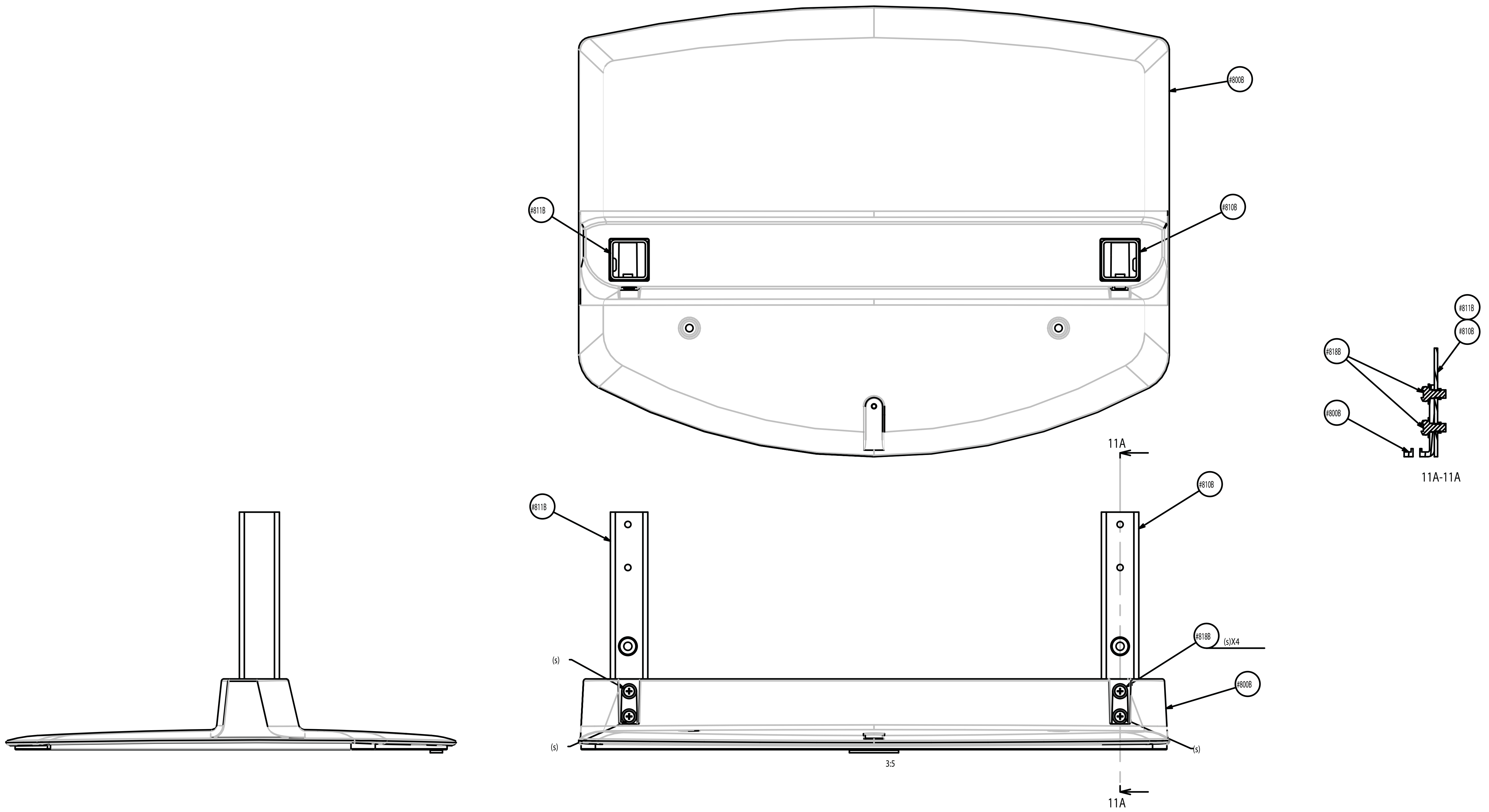

10A
#810A
#800C
P50S602
10A



10A-10A

21-2. STAND ASS'Y

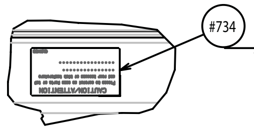
ONLY P50A402, P50A202


#800B
#811B
#810B
#811B
#810B
#818B
#800B
11A-11A
11A
#810B
#811B
#818B
(s)X4
#800B
(s)
(s)
(s)
3:5
11A

22-1.DRAWING OF OUTER SHAPE

ONLY P50S602

CAUTION FOR WRONG ASS'Y

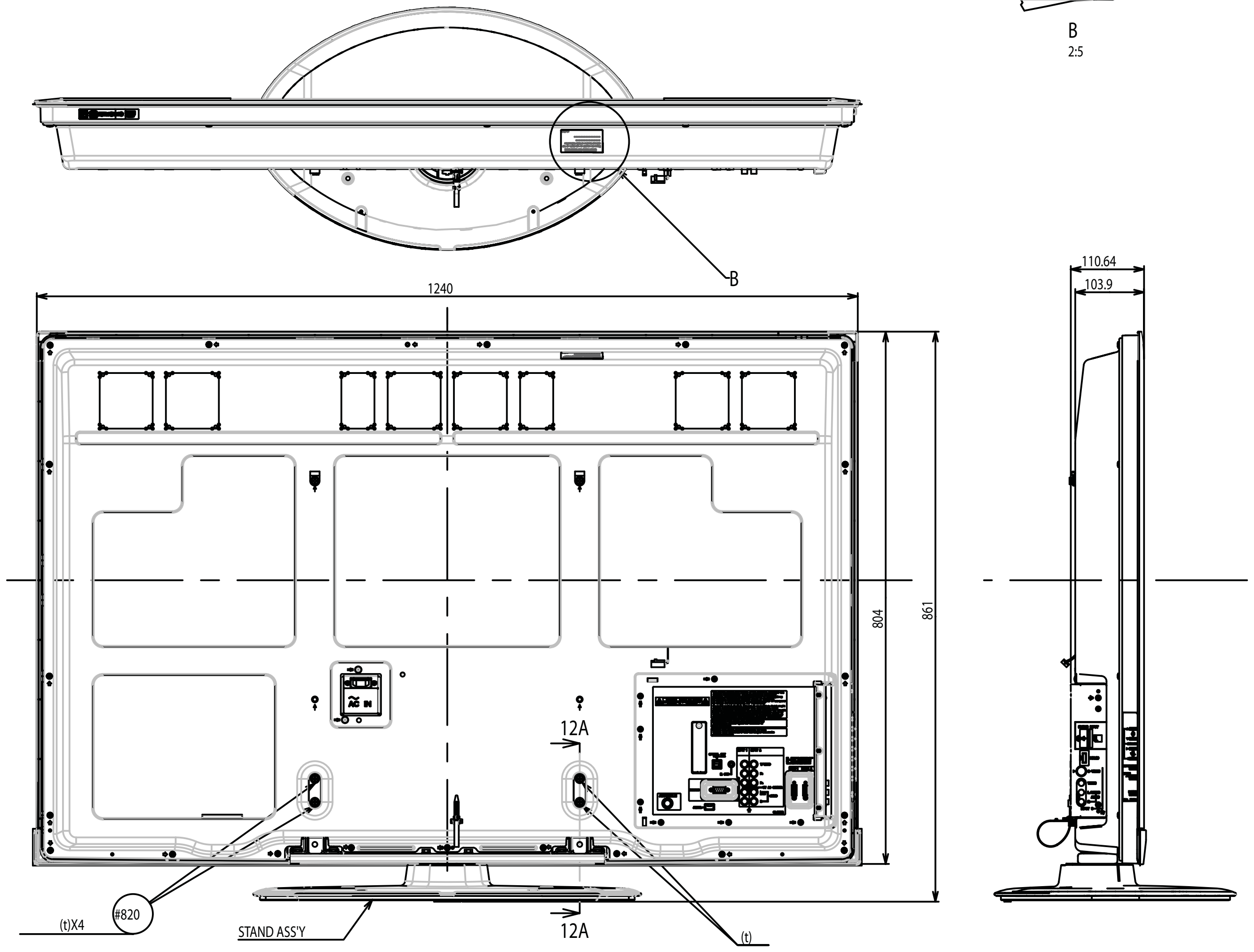


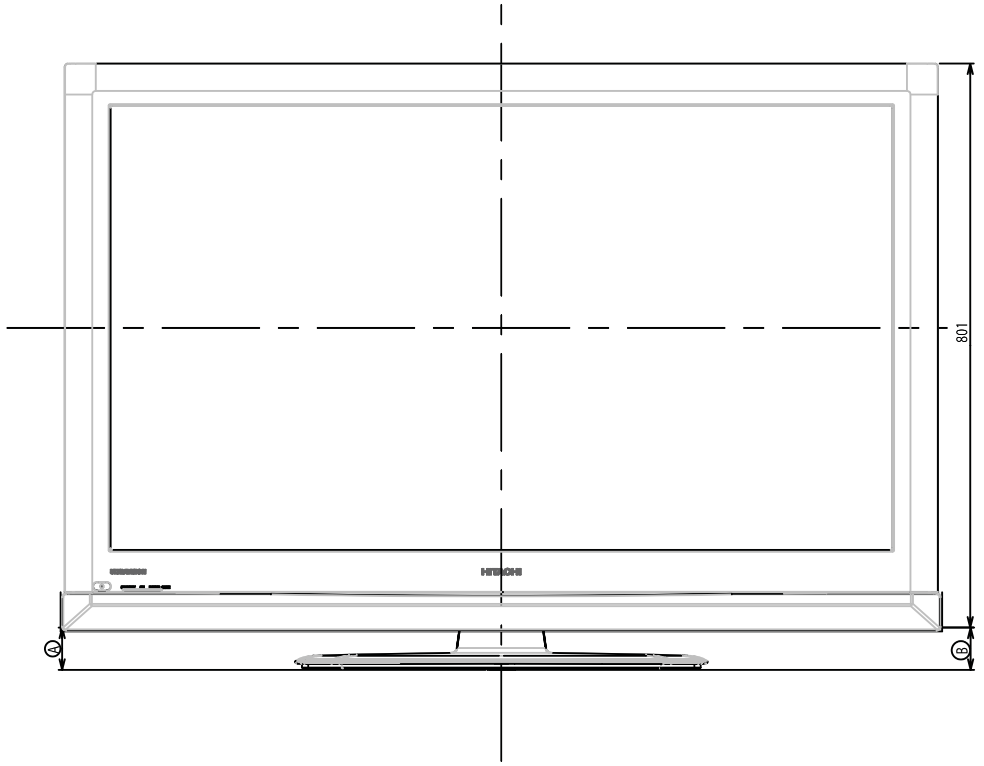
AFTER WIPING THE DUST,MATCHING WITH STAMP LINE OF THE COVER.
STICK THIS LABEL PROPERLY. ADHESIVE STRENGTH:MORE THAN 1.47N (150gf)
TILT SHALL BE LESS THAN 1mm.

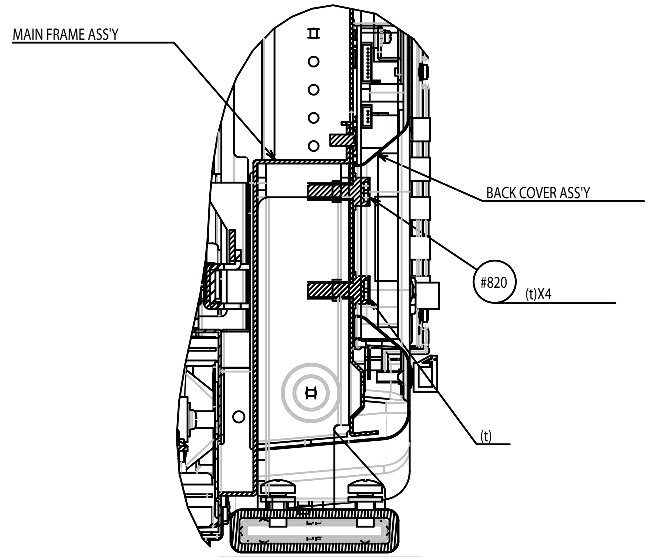
B
2:5

WORK CAUTION

SPECIFICATION OF TILT OF FRONT AND BACK : LESS THAN ±0.5mm
(VERTICAL STANDARD)
Ⓒ = ±0.5 LESS THAN


B
1240
804
861
12A
12A
#820
(t)X4
STAND ASS'Y
(t)
110.64
103.9




MAIN FRAME ASS'Y
BACK COVER ASS'Y
#820
(t)X4
(t)

12A-12A

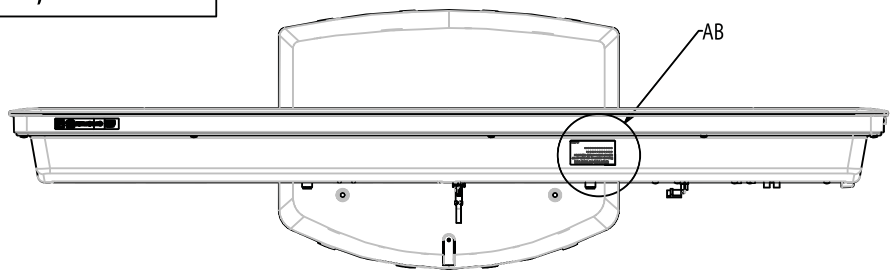
WORK CAUTION

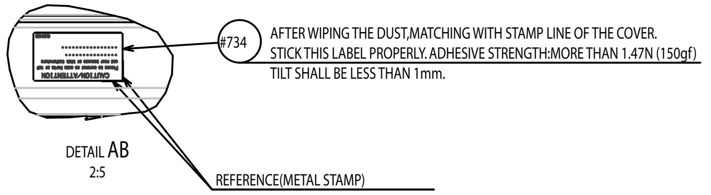
SPECIFICATION OF TILT OF RIGHT AND LEFT : LESS THAN 3mm
Ⓐ - Ⓑ =|3|LESS THAN

22-2.DRAWING OF OUTER SHAPE

ONLY P50A402, P50A202

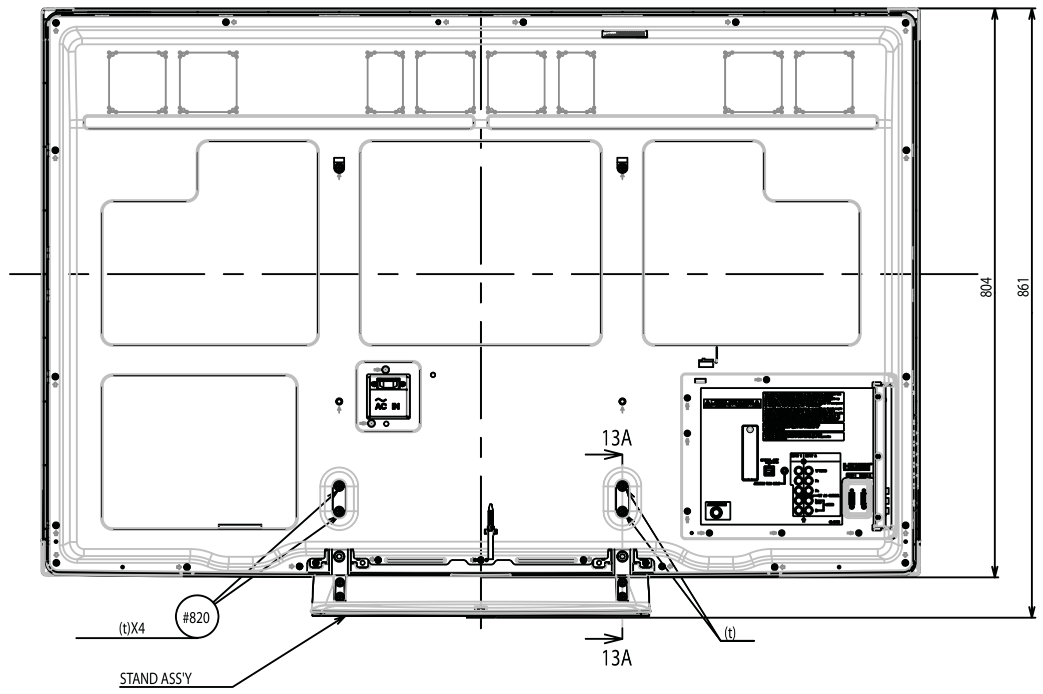
CAUTION FOR WRONG ASS'Y

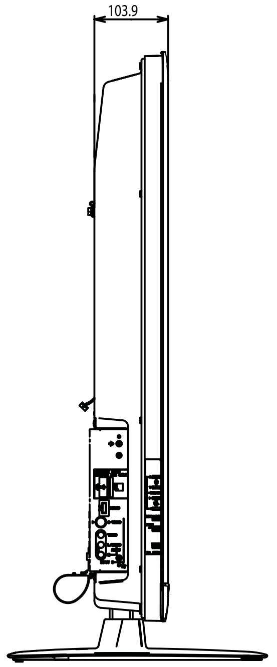


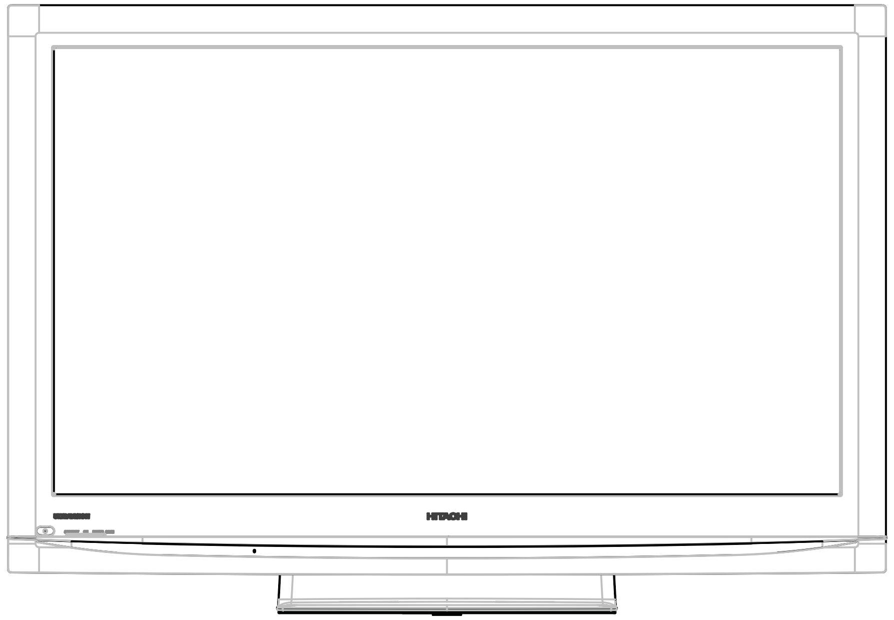

#734
AFTER WIPING THE DUST,MATCHING WITH STAMP LINE OF THE COVER.
STICK THIS LABEL PROPERLY. ADHESIVE STRENGTH:MORE THAN 1.47N (150gf)
TILT SHALL BE LESS THAN 1mm.
DETAIL AB
2:5
REFERENCE(METAL STAMP)

WORK CAUTION

SPECIFICATION OF TILT OF FRONT AND BACK : LESS THAN ±0.5mm
(VERTICAL STANDARD)
Ⓒ = ±0.5 LESS THAN

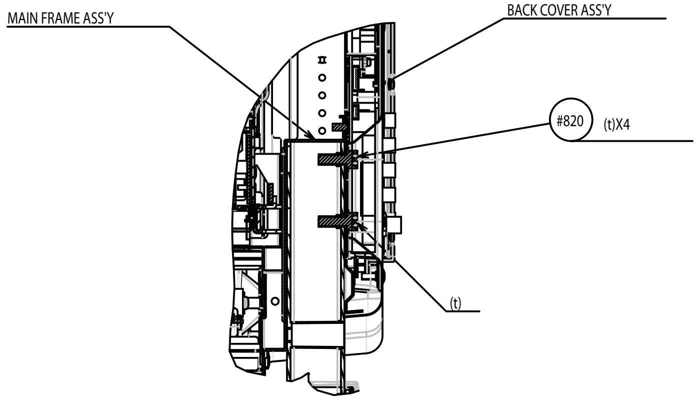

804
861
13A
#820
(t)X4
STAND ASS'Y
(t)
13A





WORK CAUTION

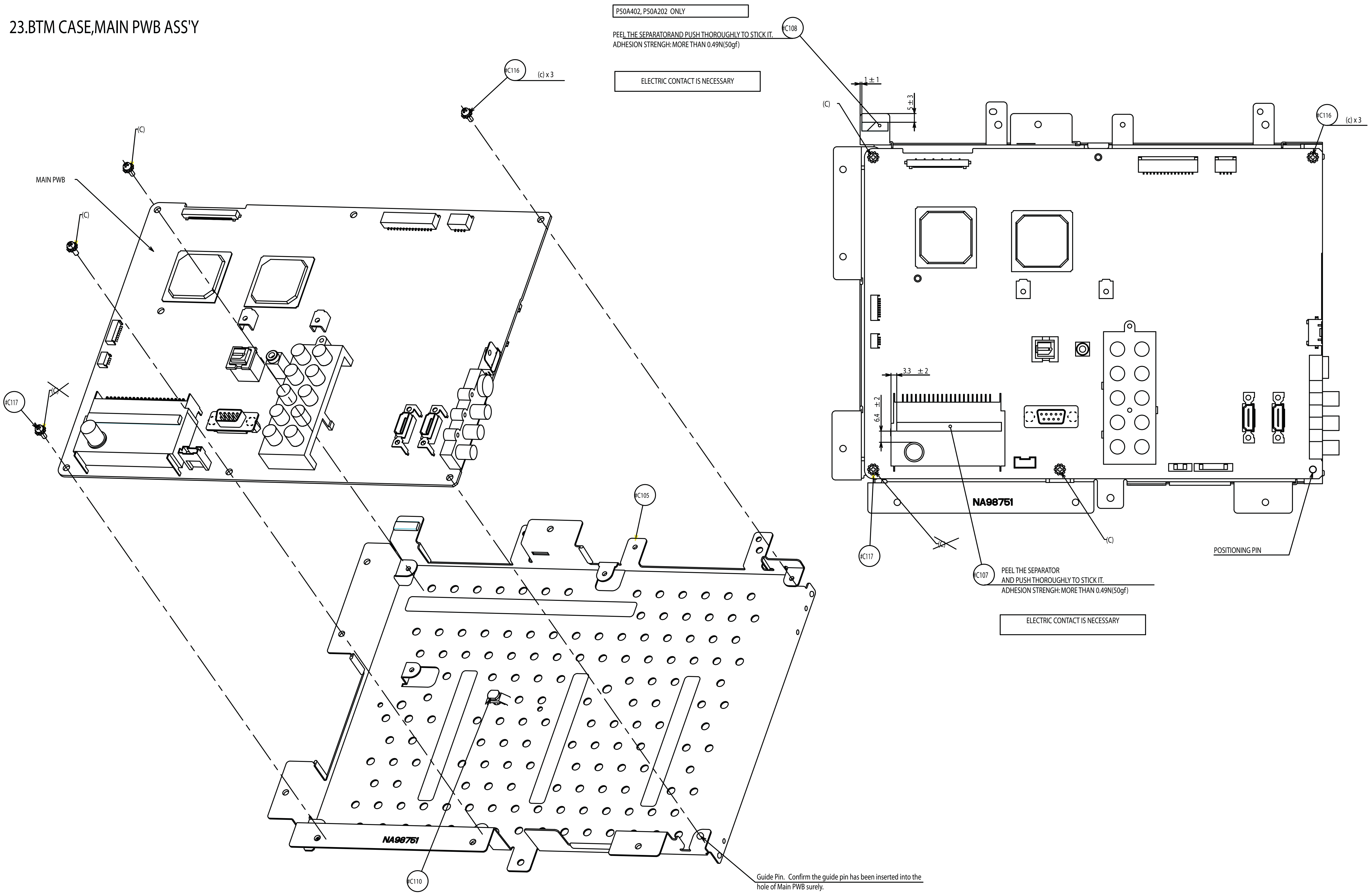
SPECIFICATION OF TILT OF RIGHT AND LEFT : LESS THAN 3mm
Ⓐ - Ⓑ =|3|LESS THAN


MAIN FRAME ASS'Y
BACK COVER ASS'Y
#820
(t)X4
(t)

13A-13A

Specifications
1. Wiring is refered to Wiring Diagram.
2. Plastics fasteners should be interlocked surely.

23.BTM CASE,MAIN PWB ASS'Y



P50A402, P50A202 ONLY

PEEL THE SEPARATORAND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

ELECTRIC CONTACT IS NECESSARY

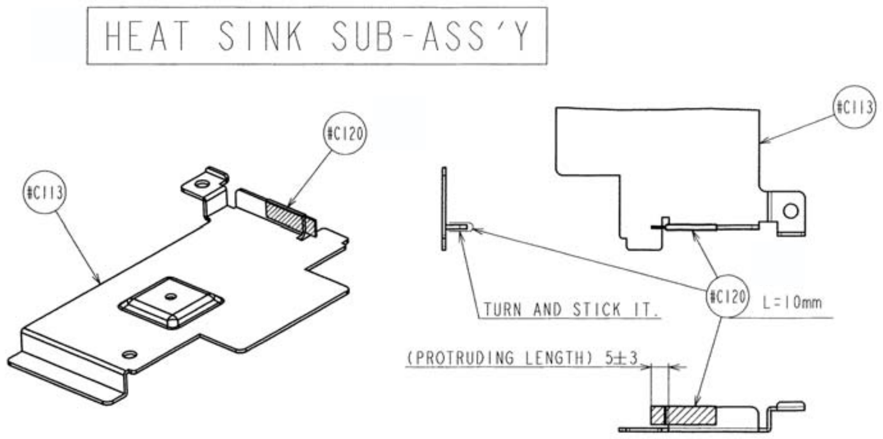
PEEL THE SEPARATOR
AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

ELECTRIC CONTACT IS NECESSARY

Guide Pin. Confirm the guide pin has been inserted into the hole of Main PWB surely.

#C116
(c) x 3
(C)
MAIN PWB
(C)
#C117
(C)
#C105
NA98751
#C110
#C108
1 ± 1
5 ± 3
(C)
#C116
(c) x 3
3.3 ± 2
6.4 ± 2
NA98751
#C117
(C)
(C)
#C107
POSITIONING PIN

24. MAIN PWB, HEAT SINK ASS'Y

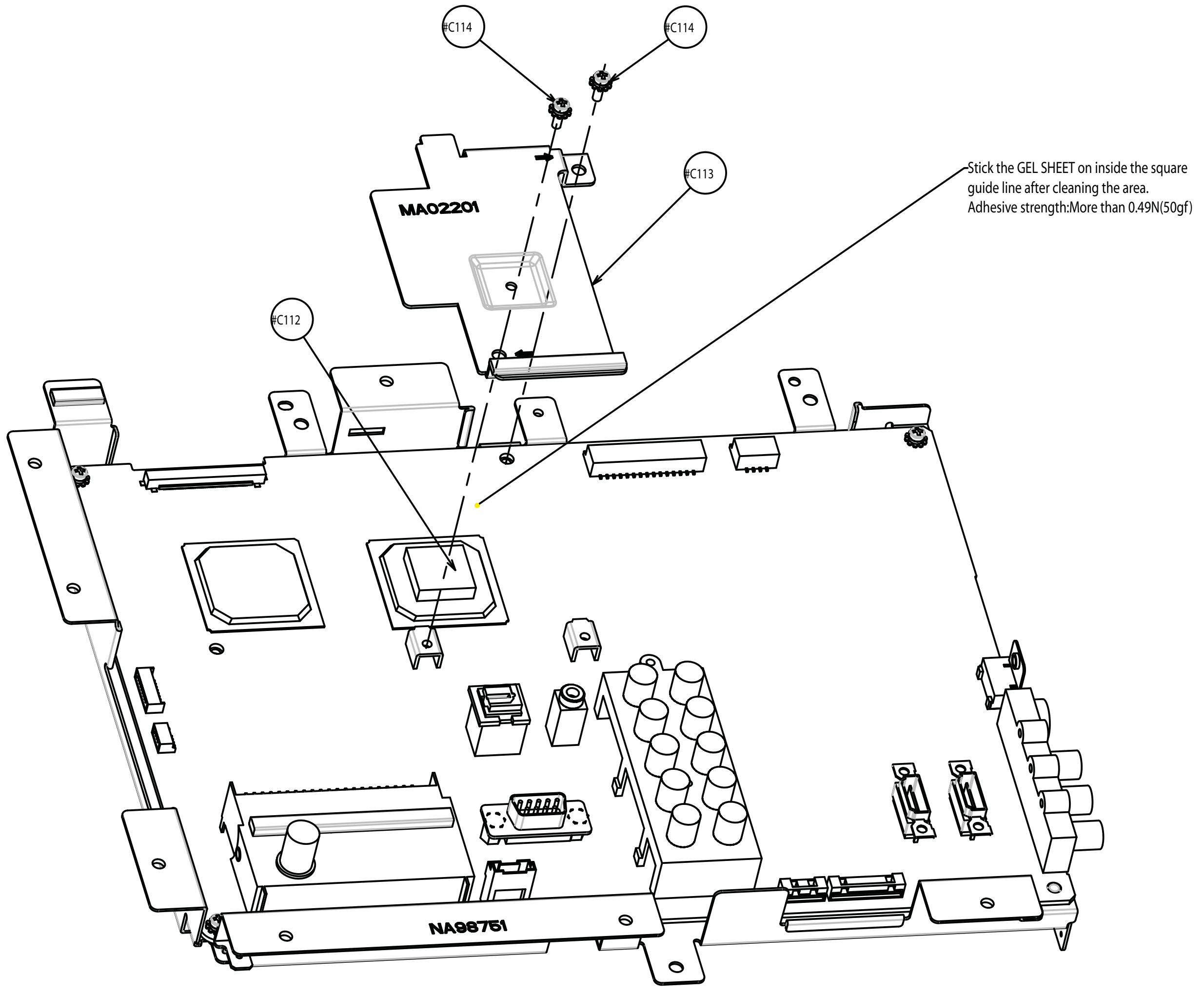


HEAT SINK SUB-ASS'Y

TURN AND STICK IT.

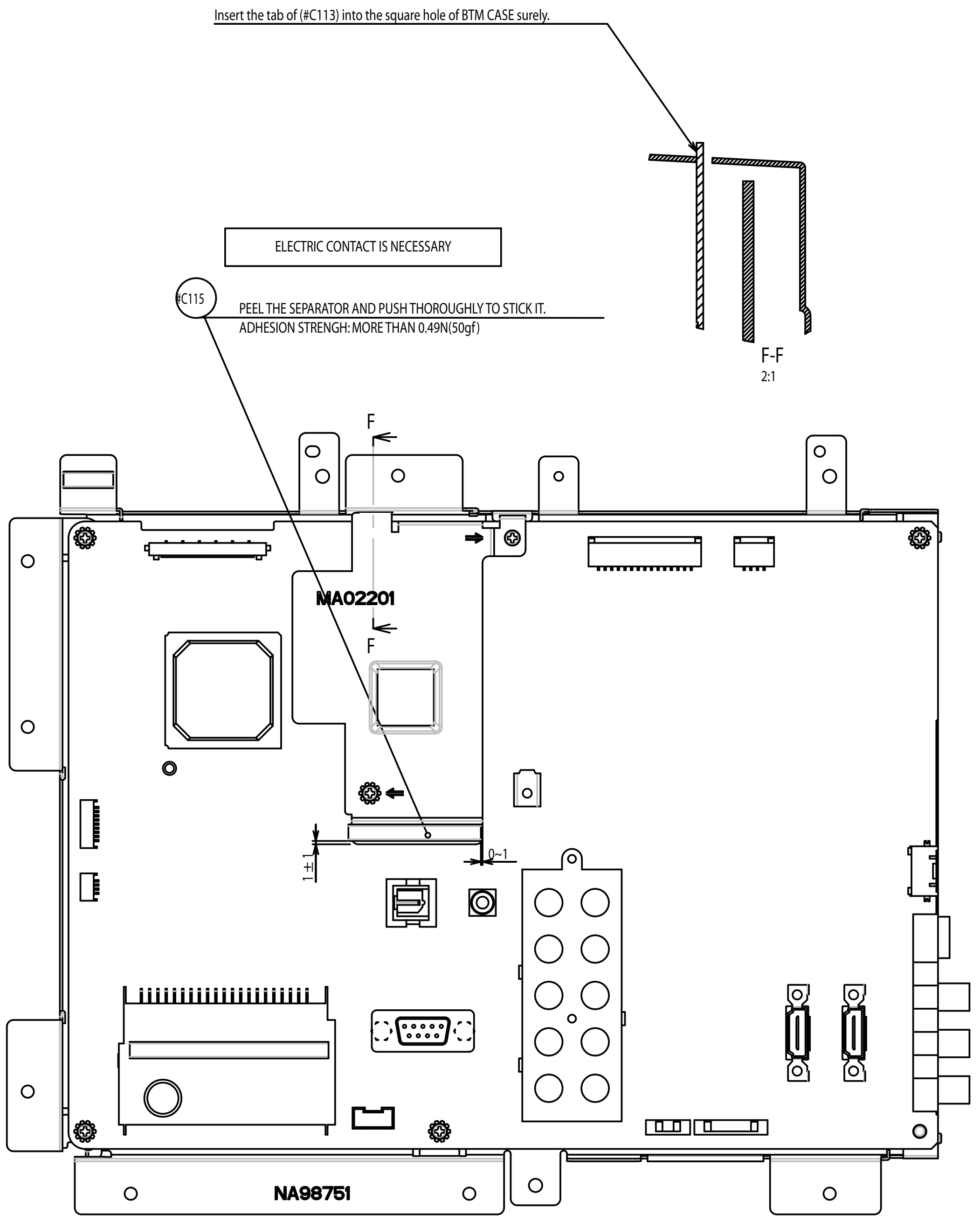
(PROTRUDING LENGTH) 5±3

#C113
#C120
#C113
#C120
L=10mm



Stick the GEL SHEET on inside the square guide line after cleaning the area.
Adhesive strength:More than 0.49N(50gf)

#C114
#C114
#C113
#C112
MA02201
NA98751



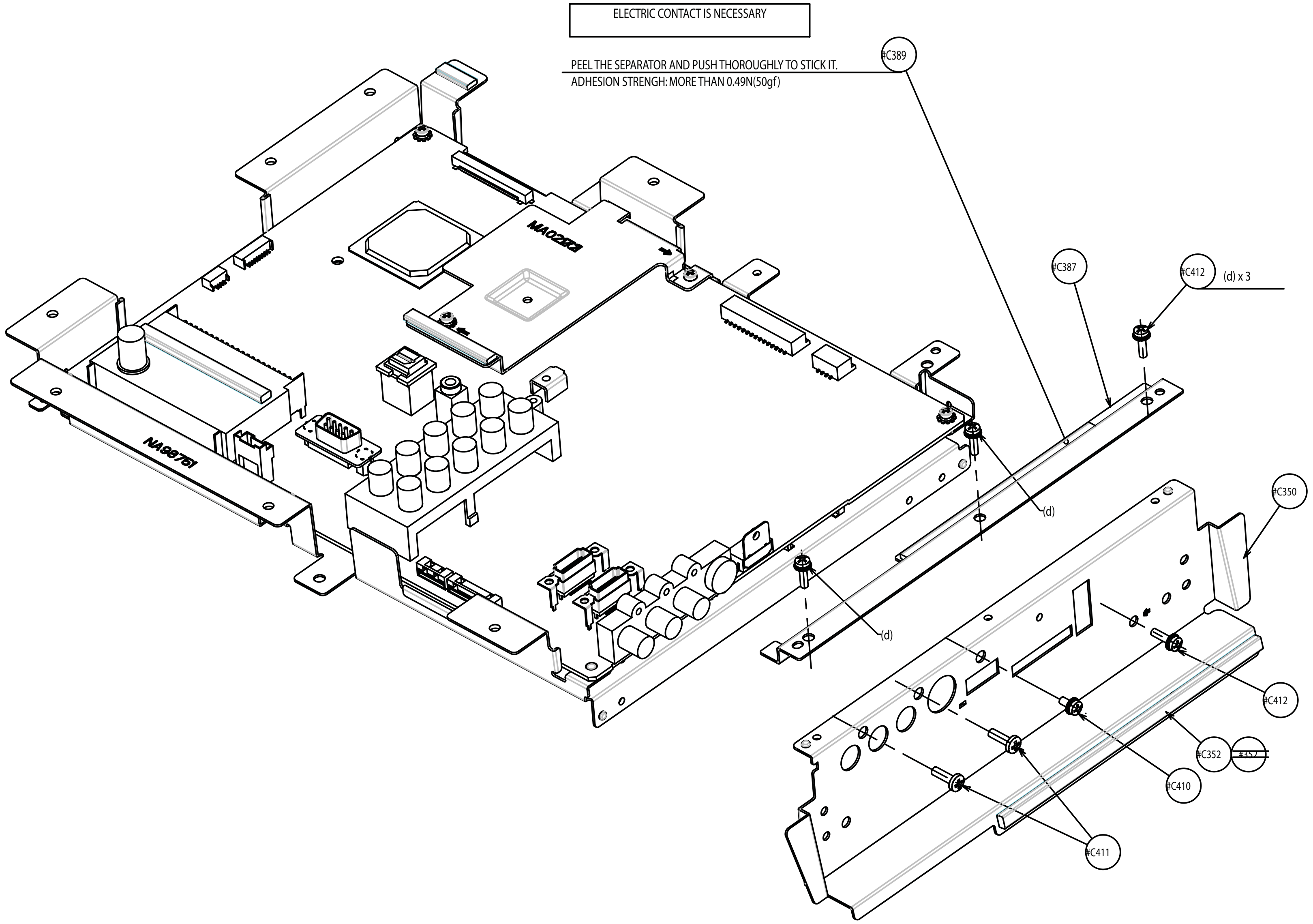
Insert the tab of (#C113) into the square hole of BTM CASE surely.

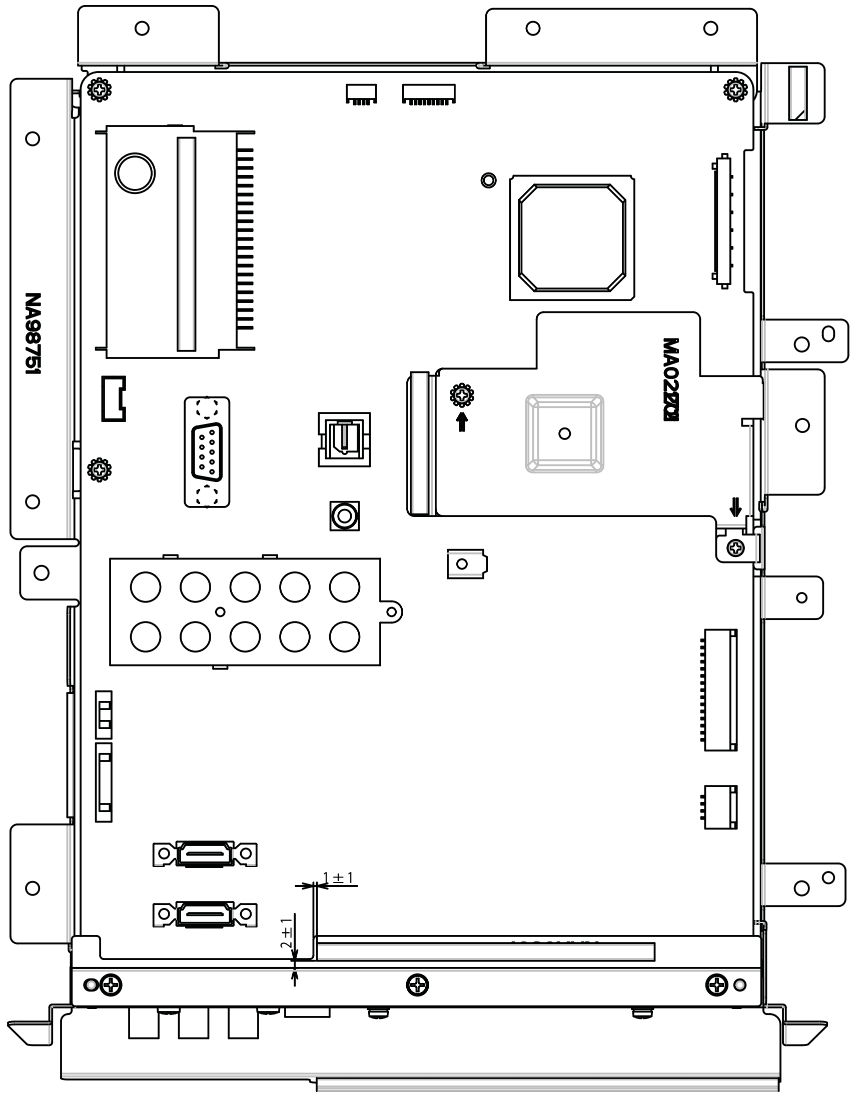
ELECTRIC CONTACT IS NECESSARY

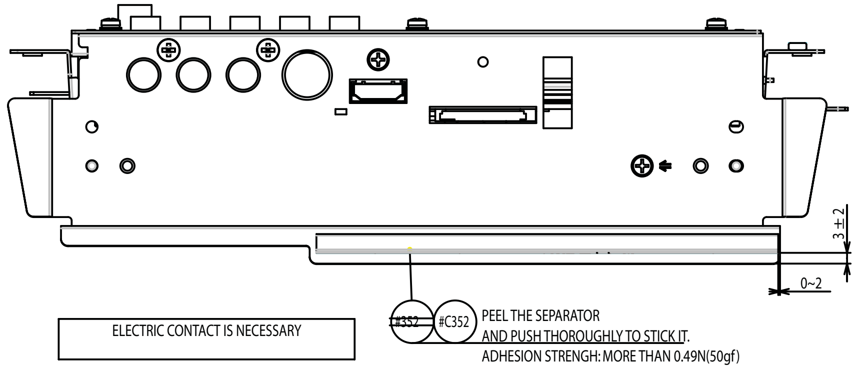
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

#C115
F-F
2:1
F
F
MA02201
1±1
0~1
NA98751

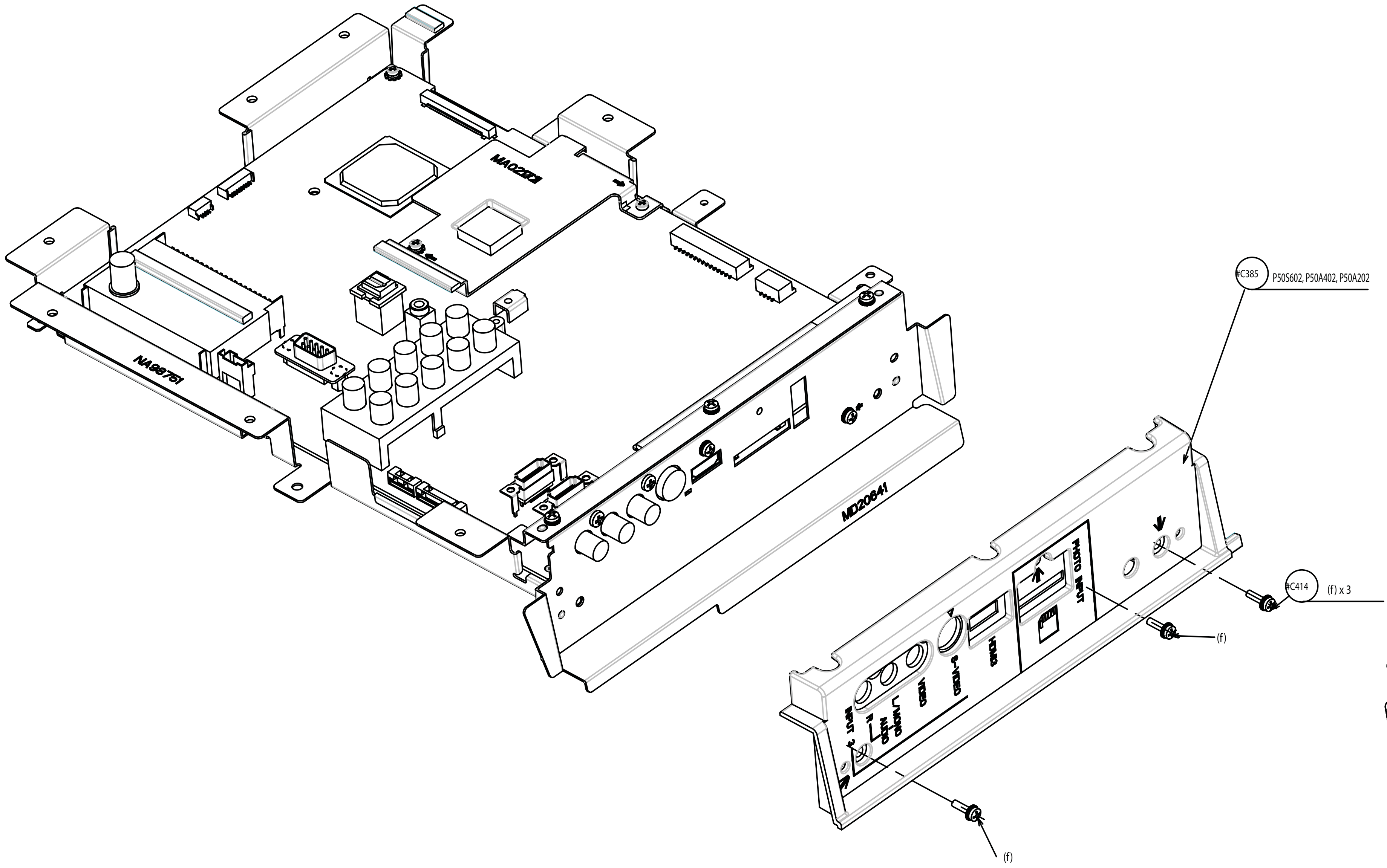
25. SIDE SHIELD MTL ASSY

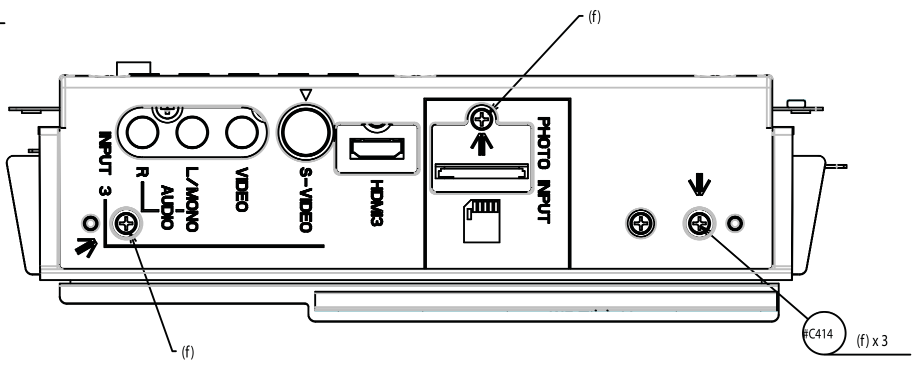

ELECTRIC CONTACT IS NECESSARY
PEEL THE SEPARATOR AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)
#C389
#C387
#C412
(d) x 3
NA98751
(d)
(d)
#C350
#C412
#C352
~~#352~~
#C410
#C411


NA98751
1 ± 1
2 ± 1


3 ± 2
0~2
ELECTRIC CONTACT IS NECESSARY
~~#352~~
#C352
PEEL THE SEPARATOR
AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGH: MORE THAN 0.49N(50gf)

26. SIDE COVER ASS'Y

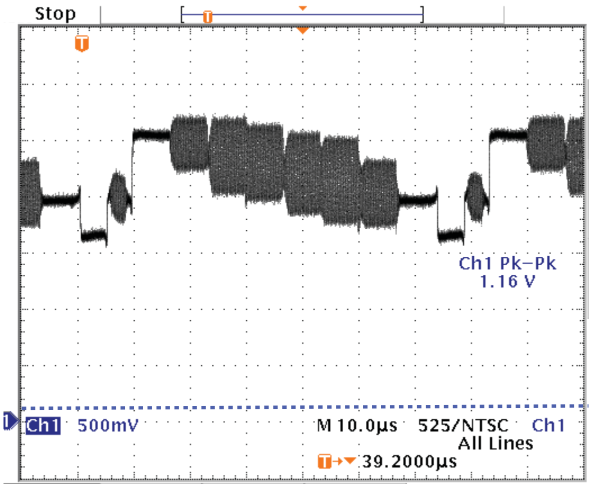

NA98761
MA02223
MD20641
#C385
P50S602, P50A402, P50A202
#C414
(f) x 3
(f)
(f)
PHOTO INPUT
HDMI3
S-VIDEO
VIDEO
L/MONO AUDIO R
INPUT 3


(f)
INPUT 3
R
L/MONO AUDIO
VIDEO
S-VIDEO
HDMI3
PHOTO INPUT
(f)
#C414
(f) x 3

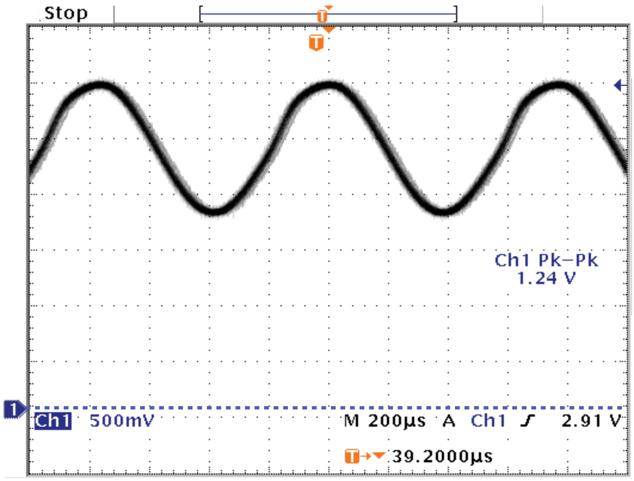
WAVEFORMS

The number icons thru the circuit schematic are reference to the next waveforms.
The waveforms were taken with a color bar video signal and with an audio signal of 1Vp-p 1kHz.

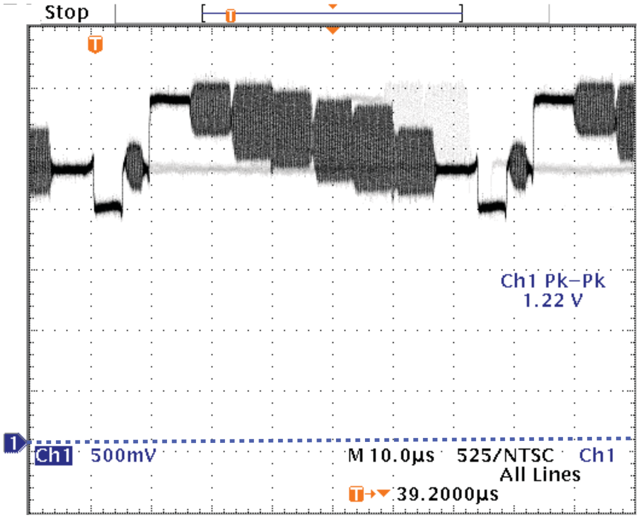
①. Pin 8 of tuner, color bar, (page 75)



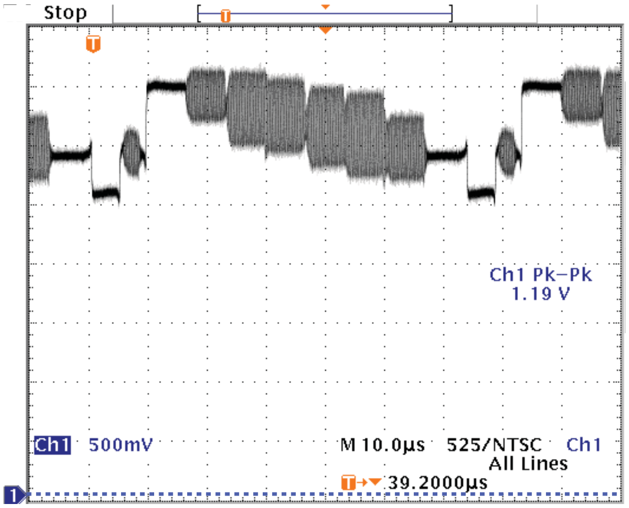
②. Pin 4 and 5 of tuner, 1.25KHz audio (page 75)



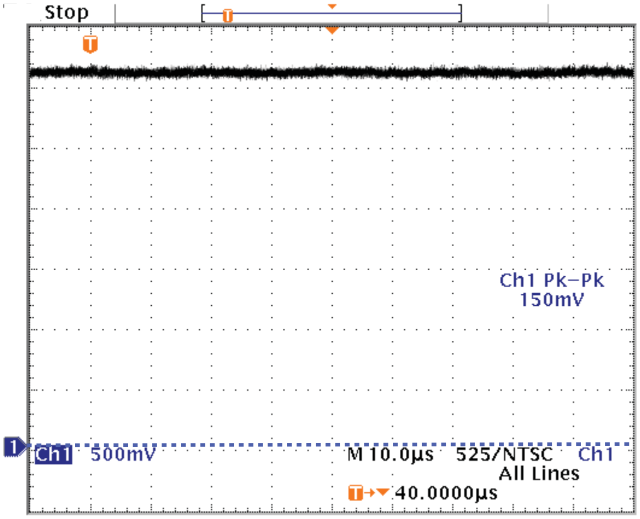
③. Pin 12 of IH01, Main in (page 76)



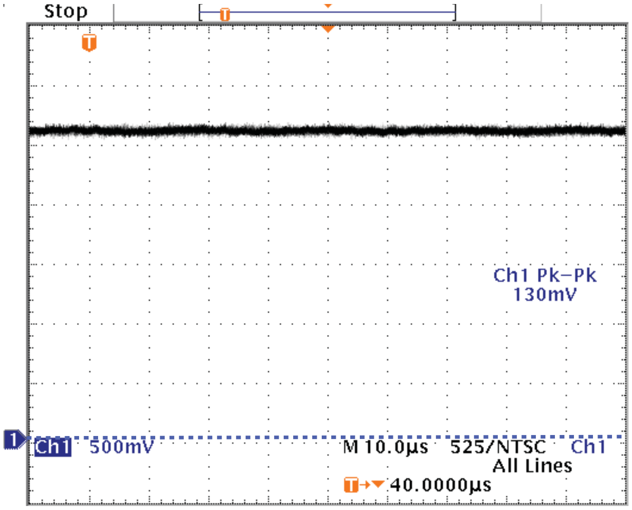
④. RH43, NTSC Main Y/V (page 76)



⑤. RH42, NTSC Main Pb (page 76)



⑥. RH41, NTSC Main Pr (page 76)



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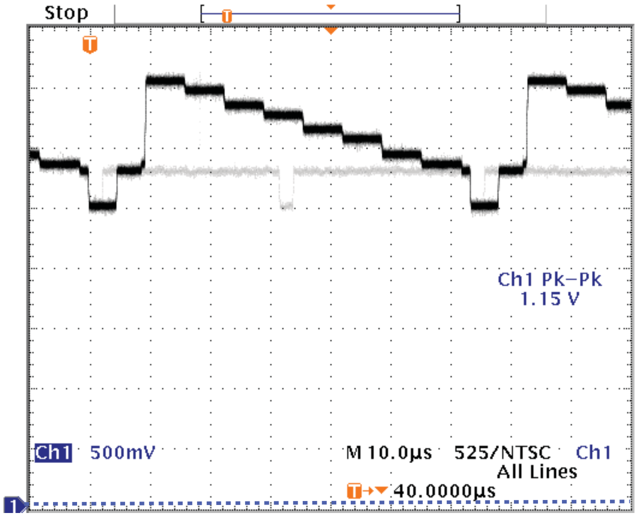
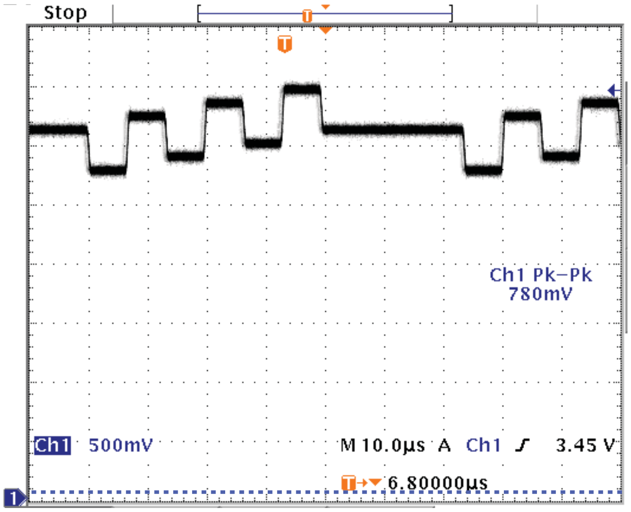
... WAVEFORMS (continued)

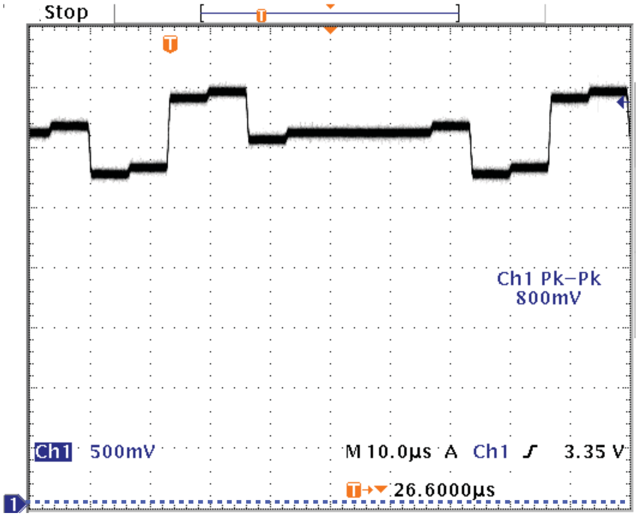
⑦. RH43 Component Main Y(page 76)

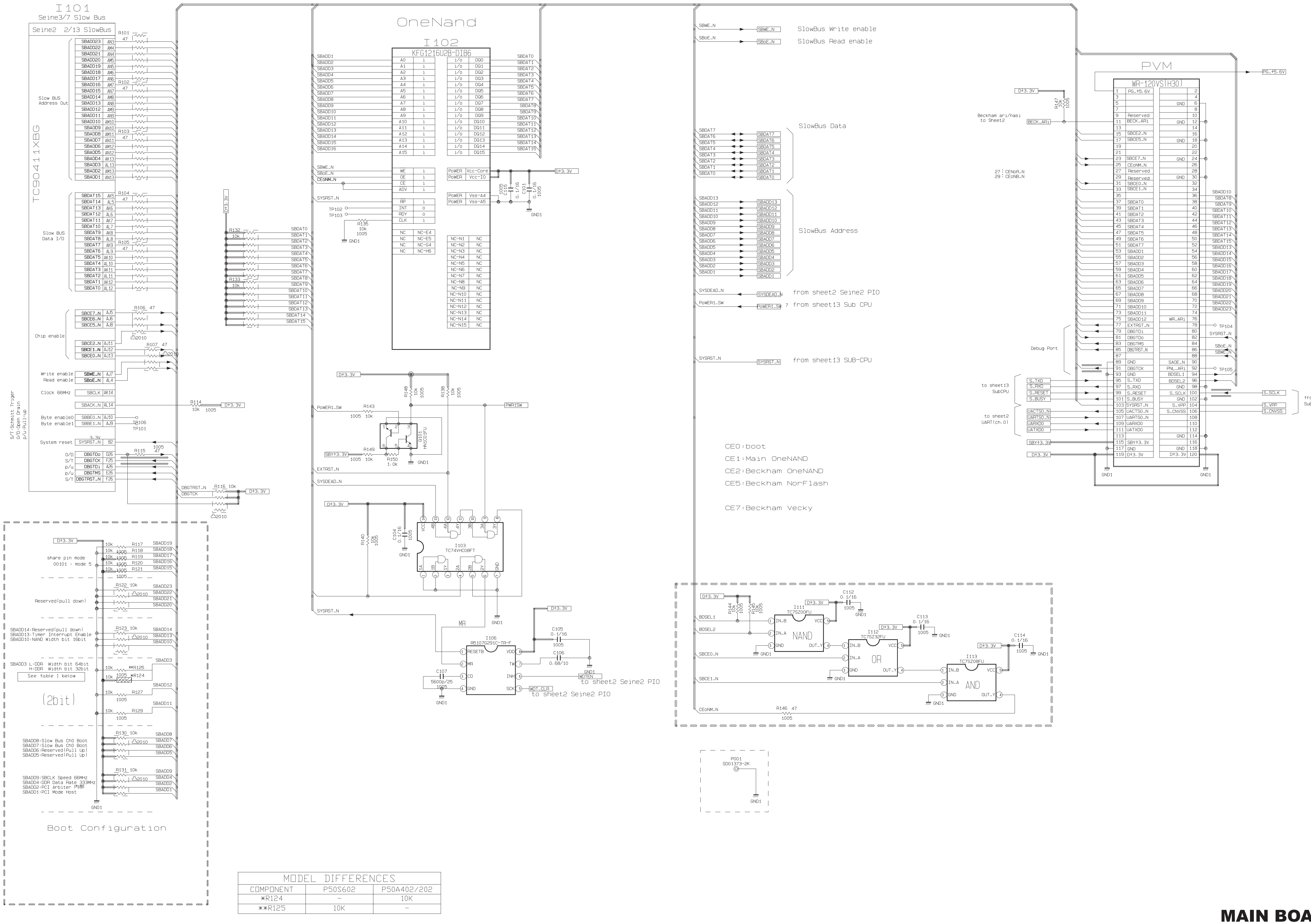


⑧. RH42 Component Main Pb (page 76)



⑨. RH41 Component Main Pr (page 76)

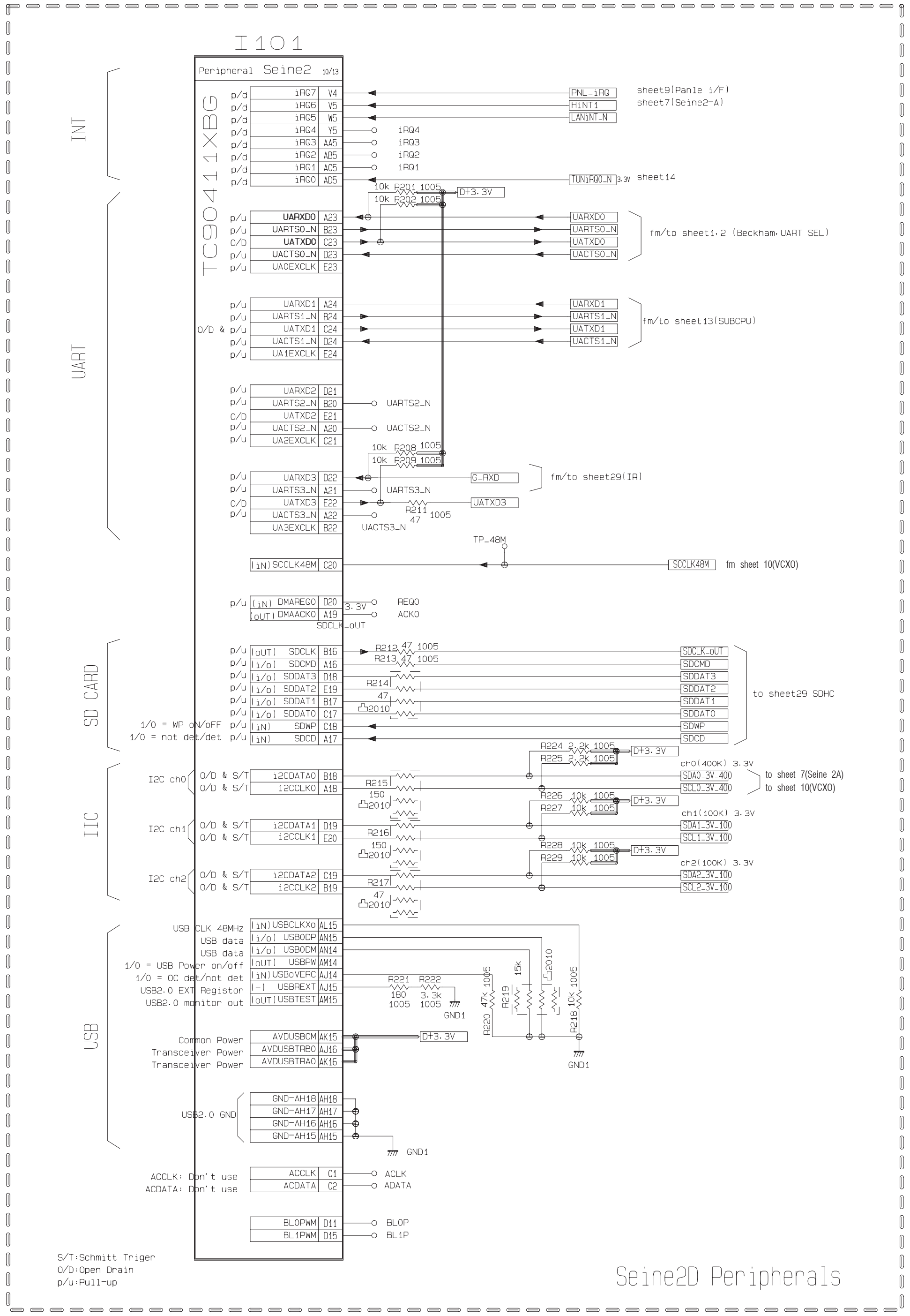


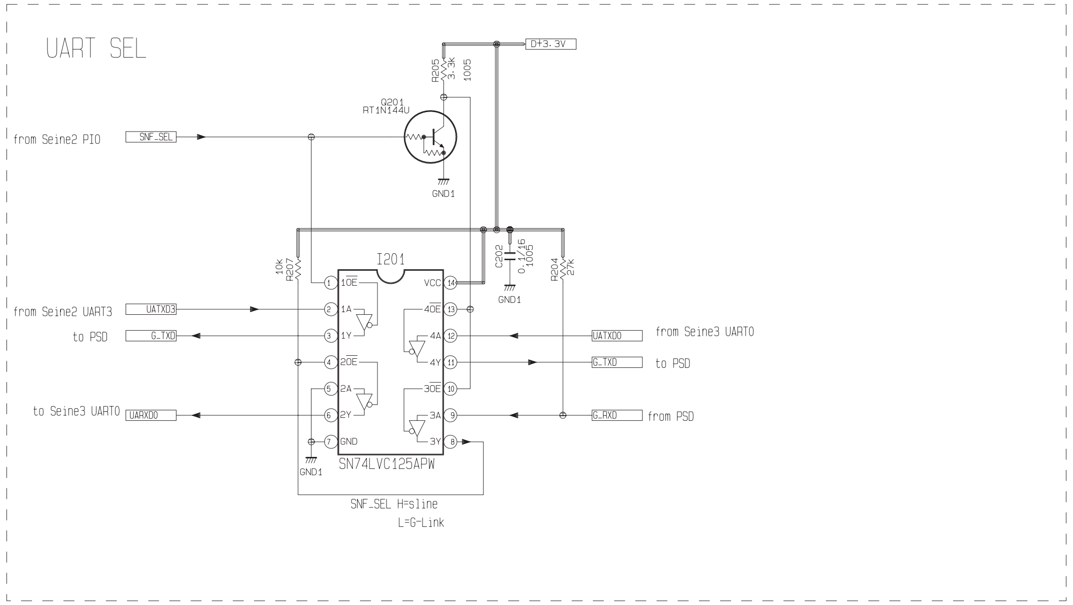

I101
Seine3/7 Slow Bus
Seine2 2/13 SlowBus
TC90411XBG
Slow BUS Address Out
Slow BUS Data I/O
Chip enable
Write enable
Read enable
Clock 66MHz
Byte enable0
Byte enable1
System reset
S/T:Schmitt Triger
O/D:Open Drain
p/u:Pull-Up
OneNand
I102
KFG1216U2B-DIB6
PWR1SW
I101 HN1C01FU
I103 TC74VHC08FT
I106 R5107G291C-TR-F
to sheet2 Seine2 PIO
SlowBus Write enable
SlowBus Read enable
SlowBus Data
SlowBus Address
from sheet2 Seine2 PIO
from sheet13 Sub CPU
from sheet13 SUB-CPU
CE0:boot
CE1:Main OneNAND
CE2:Beckham OneNAND
CE5:Beckham NorFlash
CE7:Beckham Vecky
I111 TC7SZ00FU
NAND
I112 TC7SZ32FU
OR
I113 TC7SZ08FU
AND
P001 SD01373-2K
PVM
WR-120VS(H30)
Beckham ari/nasi to Sheet2
27:CENoA_N
29:CEoNB_N
Debug Port
to sheet13 SubCPU
to sheet2 UART(ch.0)
from sheet13 SubCPU
share pin mode
00101 : mode 5
Reserved(pull down)
SBADD14:Reserved(pull down)
SBADD13:Timer Interrupt Enable
SBADD10:NAND Width bit 16bit
SBADD3 L:DDR Width bit 64bit
H:DDR Width bit 32bit
See table 1 below
(2bit)
SBADD8:Slow Bus Ch0 Boot
SBADD7:Slow Bus Ch0 Boot
SBADD6:Reserved(Pull Up)
SBADD5:Reserved(Pull Up)
SBADD9:SBCLK Speed 66MHz
SBADD4:DDR Data Rate 333MHz
SBADD2:PCI Arbiter PS80
SBADD1:PCI Mode Host
Boot Configuration

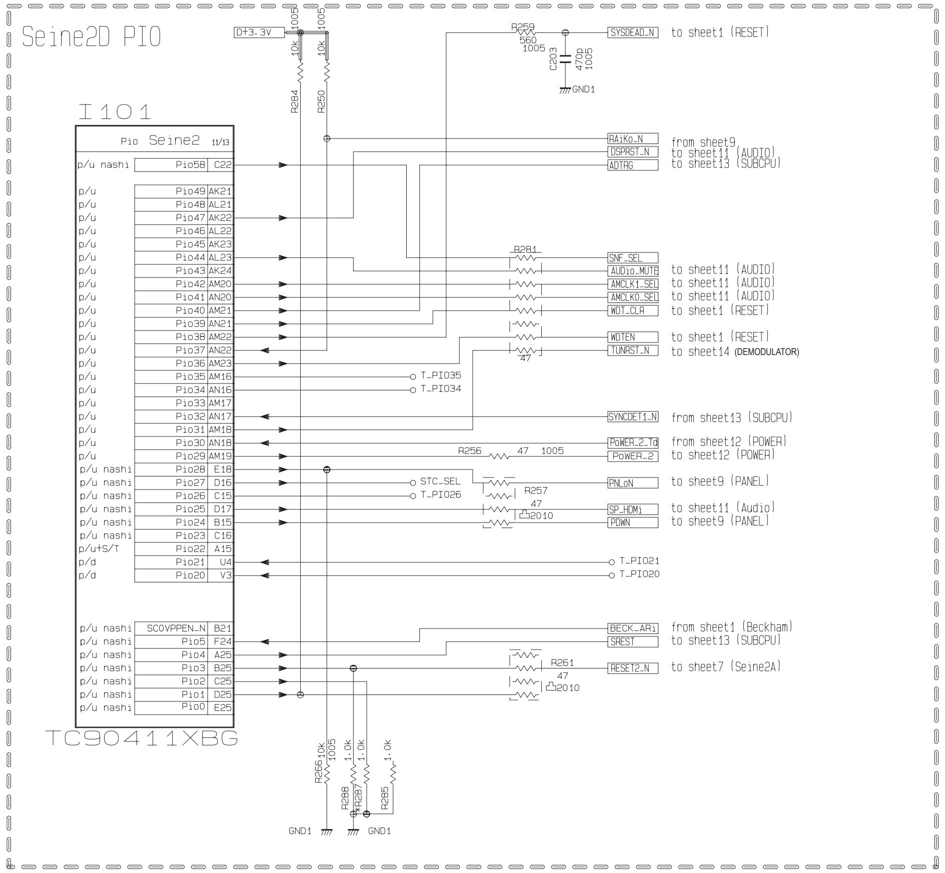
MODEL DIFFERENCES

COMPONENT	P50S602	P50A402/202
*R124	-	10K
**R125	10K	-

MAIN BOARD SHEET: 001
Slow Bus/Flash


I101
Peripheral Seine2
TC90411XBG
INT
UART
SD CARD
IIC
USB
fm/to sheet1-2 (Beckham UART SEL)
fm/to sheet13(SUBCPU)
fm/to sheet29(IR)
to sheet29 SDHC
S/T:Schmitt Triger
O/D:Open Drain
p/u:Pull-up
Seine2D Peripherals


UART SEL
from Seine2 PIO
from Seine2 UART3
to PSD
to Seine3 UART0
from Seine3 UART0
from PSD
I201
SN74LVC125APW
SNF_SEL H=sline
L=G-Link


Seine2D PIO
I101
Pio Seine2
TC90411XBG

MAIN BOARD SHEET: 002
Peripherals

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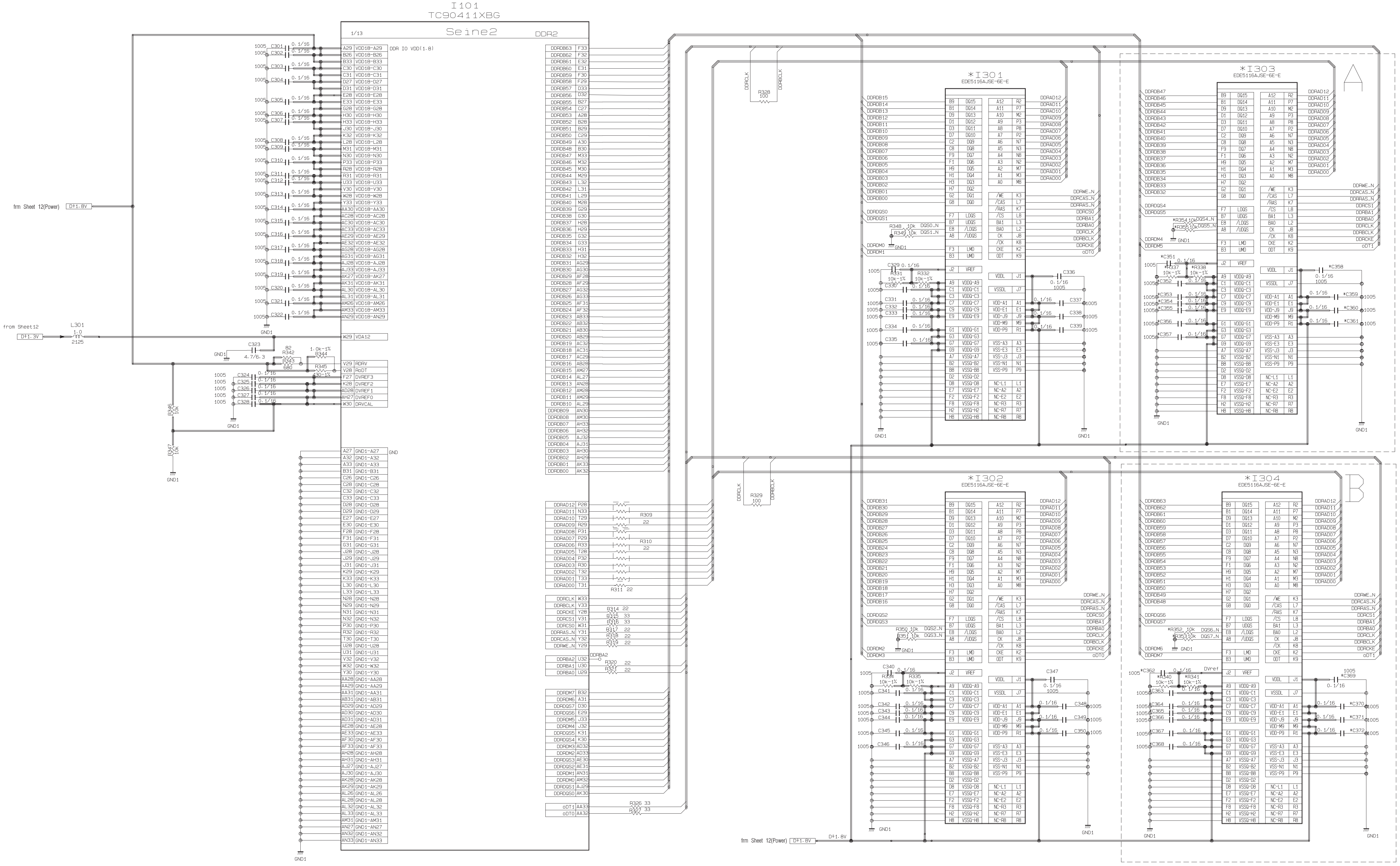
I101
TC90411XBG
Seine2
DDR2
1/13
DDR IO VDD(1.8)
frm Sheet 12(Power)
D+1.8V
from Sheet12
D+1.3V
L301
*I301
EDE5116AJSE-6E-E
*I302
EDE5116AJSE-6E-E
*I303
EDE5116AJSE-6E-E
*I304
EDE5116AJSE-6E-E
A
B
GND1
D+1.8V

MODEL DIFFERENCES

CIRCUIT	P50S602	P50A402/202
A	YES	-
B	YES	-

MAIN BOARD SHEET: 003
DDR I/F

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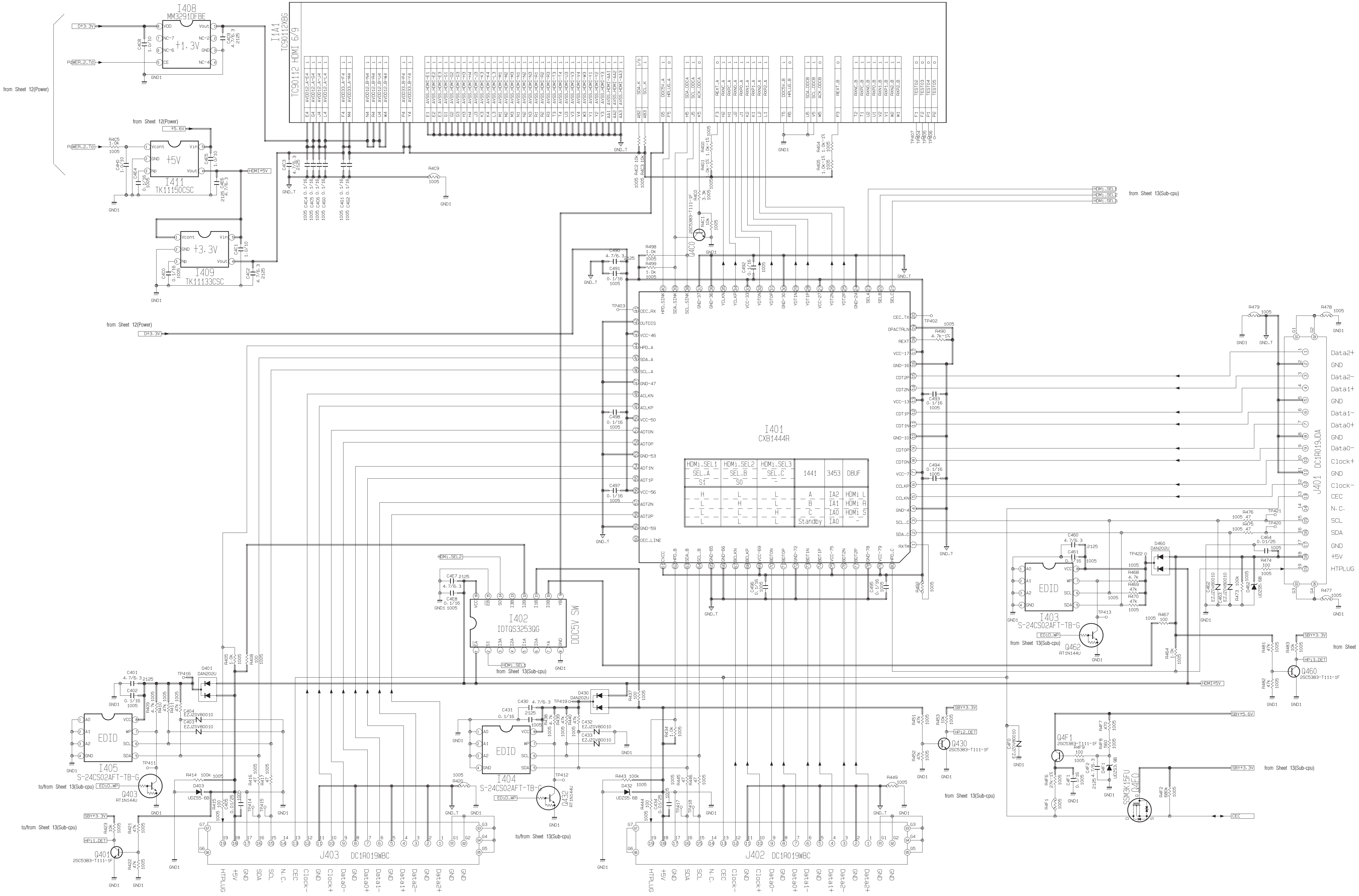
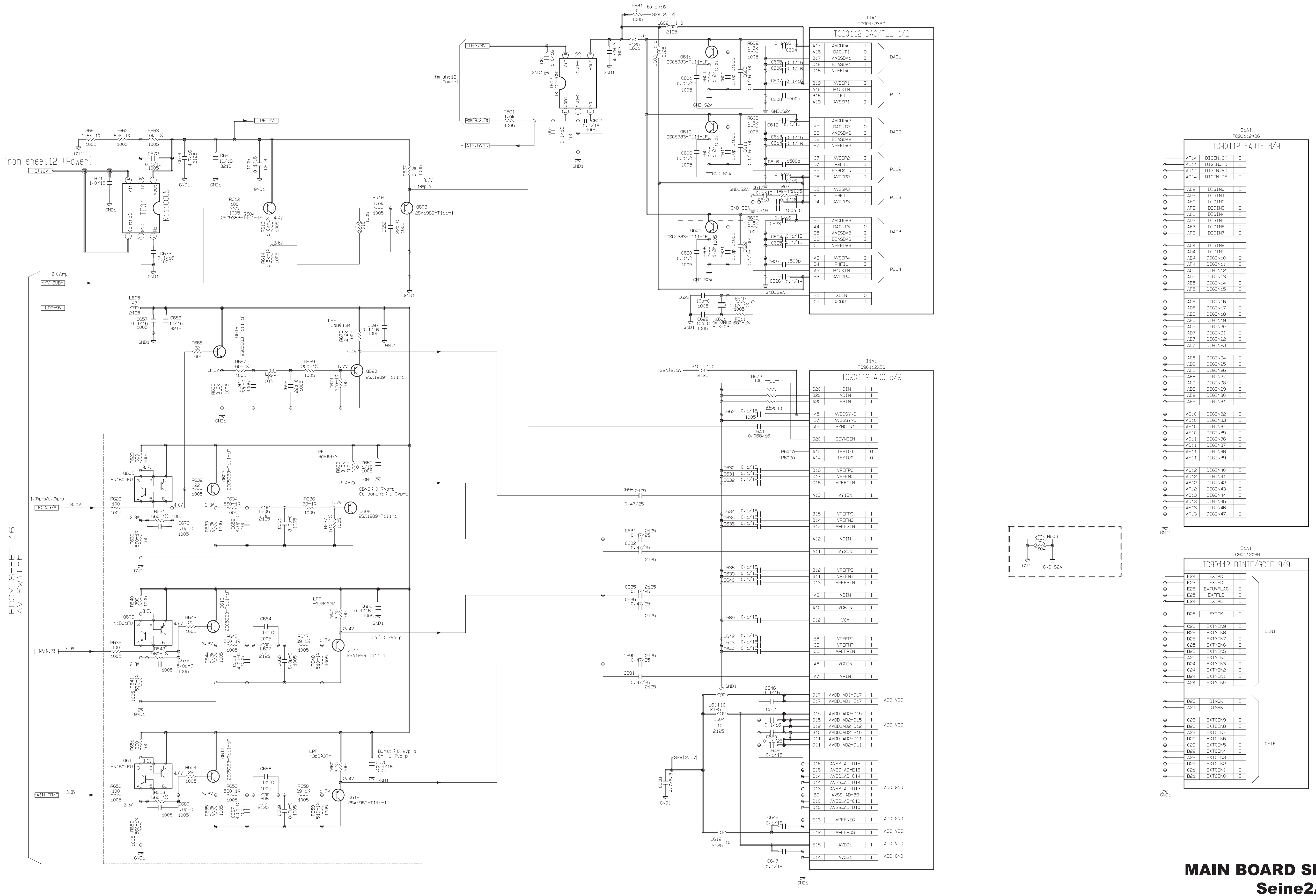

I408
MM3291DFBE
+1.3V
from Sheet 12(Power)
I411
TK11150CSC
+5V
I409
TK11133CSC
+3.3V
I1A1
TC90112 HDMI 6/9
from Sheet 13(Sub-cpu)
I401
CXB1444R
I402
IDTQS3253QG
DDC5V SW
I405
S-24CS02AFT-TB-G
EDID
I404
S-24CS02AFT-TB-G
EDID
I403
S-24CS02AFT-TB-G
EDID
J403 DC1R019WBC
J402 DC1R019WBC
J401 DC1R019JDA
Q401
Q403
Q430
Q432
Q460
Q462
Q4F1
Q4F0
to/from Sheet 13(Sub-cpu)
HTPLUG
+5V
GND
SDA
SCL
N.C.
CEC
Clock-
Clock+
Data0-
Data0+
Data1-
Data1+
Data2-
Data2+

HDMi_SEL1 SEL_A S1	HDMi_SEL2 SEL_B S0	HDMi_SEL3 SEL_C -	1441	3453	D8UF
H	L	L	A	IA2	HDMi L
L	H	L	B	IA1	HDMi R
L	L	H	C	IA0	HDMi S
L	L	L	Standby	IA0	-

MAIN BOARD SHEET: 004
HDMI I/F



from sheet12 (Power)
FROM SHEET 16
AV Switch
fm sht12 (Power)
R681 to sht6
D+10V
DF3.3V
LPFF9V
POWER_2.Td
S2A+2.5VON
S2A+2.5V
Y/V_SLBM
MAIN_Y/V
MAIN_PB
MAIN_PR/G
2.0Vp-p
1.0Vp-p/0.7Vp-p
CBVS : 0.7Vp-p
Component : 1.0Vp-p
Cb : 0.7Vp-p
Burst : 0.2Vp-p
Cr : 0.7Vp-p
LPF -3dB@13M
LPF -3dB@37M
I601 TK11100CS
I602 TK11225CMC
Q603 2SA1989-T111-1
Q604 2SC5383-T111-1F
Q605 HN1B01FU
Q609 HN1B01FU
Q615 HN1B01FU
Q607 2SC5383-T111-1F
Q613 2SC5383-T111-1F
Q617 2SC5383-T111-1F
Q619 2SC5383-T111-1F
Q608 2SA1989-T111-1
Q614 2SA1989-T111-1
Q618 2SA1989-T111-1
Q620 2SA1989-T111-1
Q611 2SC5383-T111-1F
Q612 2SC5383-T111-1F
Q601 2SC5383-T111-1F
X601 42.9MHz FCX-03
GND1
GND_S2A
I1A1
TC90112XBG
TC90112 DAC/PLL 1/9
A17 AVDDDA1 I
A16 DAOUT1 O
B17 AVSSDA1 I
C18 BIASDA1 I
D18 VREFDA1 I
DAC1
B19 AVDDP1 I
A18 P1CKIN I
B18 P1FIL I
A19 AVSSP1 I
PLL1
D9 AVDDDA2 I
E9 DAOUT2 O
E8 AVSSDA2 I
D8 BIASDA2 I
E7 VREFDA2 I
DAC2
C7 AVSSP2 I
D7 P2FIL I
E6 P23CKIN I
D6 AVDDP2 I
PLL2
D5 AVSSP3 I
E5 P3FIL I
D4 AVDDP3 I
PLL3
B6 AVDDDA3 I
A4 DAOUT3 O
B5 AVSSDA3 I
C6 BIASDA3 I
C5 VREFDA3 I
DAC3
A2 AVSSP4 I
B4 P4FIL I
A3 P4CKIN I
B3 AVDDP4 I
PLL4
B1 XOIN O
C1 XOOUT I
TC90112 ADC 5/9
C20 HDIN I
B20 VDIN I
A20 FBIN I
A5 AVDDSYNC I
B7 AVSSSYNC I
A6 SYNCIN1 I
D20 CSYNCIN I
TP601
TP602
A15 TEST01 O
A14 TEST00 O
B16 VREFPC I
C17 VREFNC I
C16 VREFCIN I
A13 VY1IN I
B15 VREFPG I
B14 VREFNG I
B13 VREFGIN I
A12 VGIN I
A11 VY2IN I
B12 VREFPB I
B11 VREFNB I
C13 VREFBIN I
A9 VBIN I
A10 VCBIN I
C12 VCM I
B8 VREFPR I
C9 VREFNR I
C8 VREFRIN I
A8 VCRIN I
A7 VRIN I
D17 AVDD_AD1-D17 I
E17 AVDD_AD1-E17 I
ADC VCC
C15 AVDD_AD2-C15 I
D15 AVDD_AD2-D15 I
D12 AVDD_AD2-D12 I
B10 AVDD_AD2-B10 I
C11 AVDD_AD2-C11 I
D11 AVDD_AD2-D11 I
ADC VCC
D16 AVSS_AD-D16 I
E16 AVSS_AD-E16 I
C14 AVSS_AD-C14 I
D14 AVSS_AD-D14 I
D13 AVSS_AD-D13 I
B9 AVSS_AD-B9 I
C10 AVSS_AD-C10 I
D10 AVSS_AD-D10 I
ADC GND
E13 VREFNEG I
ADC GND
E12 VREFPOS I
ADC VCC
E15 AVDD1 I
ADC VCC
E14 AVSS1 I
ADC GND
TC90112 FADIF 8/9
AF14 DIGIN_CK I
AE14 DIGIN_HD I
AD14 DIGIN_VD I
AC14 DIGIN_DE I
AC2 DIGIN0 I
AD2 DIGIN1 I
AE2 DIGIN2 I
AF2 DIGIN3 I
AC3 DIGIN4 I
AD3 DIGIN5 I
AE3 DIGIN6 I
AF3 DIGIN7 I
AC4 DIGIN8 I
AD4 DIGIN9 I
AE4 DIGIN10 I
AF4 DIGIN11 I
AC5 DIGIN12 I
AD5 DIGIN13 I
AE5 DIGIN14 I
AF5 DIGIN15 I
AC6 DIGIN16 I
AD6 DIGIN17 I
AE6 DIGIN18 I
AF6 DIGIN19 I
AC7 DIGIN20 I
AD7 DIGIN21 I
AE7 DIGIN22 I
AF7 DIGIN23 I
AC8 DIGIN24 I
AD8 DIGIN25 I
AE8 DIGIN26 I
AF8 DIGIN27 I
AC9 DIGIN28 I
AD9 DIGIN29 I
AE9 DIGIN30 I
AF9 DIGIN31 I
AC10 DIGIN32 I
AD10 DIGIN33 I
AE10 DIGIN34 I
AF10 DIGIN35 I
AC11 DIGIN36 I
AD11 DIGIN37 I
AE11 DIGIN38 I
AF11 DIGIN39 I
AC12 DIGIN40 I
AD12 DIGIN41 I
AE12 DIGIN42 I
AF12 DIGIN43 I
AC13 DIGIN44 I
AD13 DIGIN45 I
AE13 DIGIN46 I
AF13 DIGIN47 I
TC90112 DINIF/GCIF 9/9
F24 EXTVD I
F23 EXTHD I
E26 EXTUVFLAG I
E25 EXTFLD I
E24 EXTVE I
D26 EXTCK I
C26 EXTYIN9 I
B26 EXTYIN8 I
D25 EXTYIN7 I
C25 EXTYIN6 I
B25 EXTYIN5 I
A25 EXTYIN4 I
D24 EXTYIN3 I
C24 EXTYIN2 I
B24 EXTYIN1 I
A24 EXTYIN0 I
DINIF
D23 DINCK I
A21 DINPK I
C23 EXTCIN9 I
B23 EXTCIN8 I
A23 EXTCIN7 I
D22 EXTCIN6 I
C22 EXTCIN5 I
B22 EXTCIN4 I
A22 EXTCIN3 I
D21 EXTCIN2 I
C21 EXTCIN1 I
B21 EXTCIN0 I
GFIF
R603
R604

MAIN BOARD SHEET: 006
Seine2A/Video in

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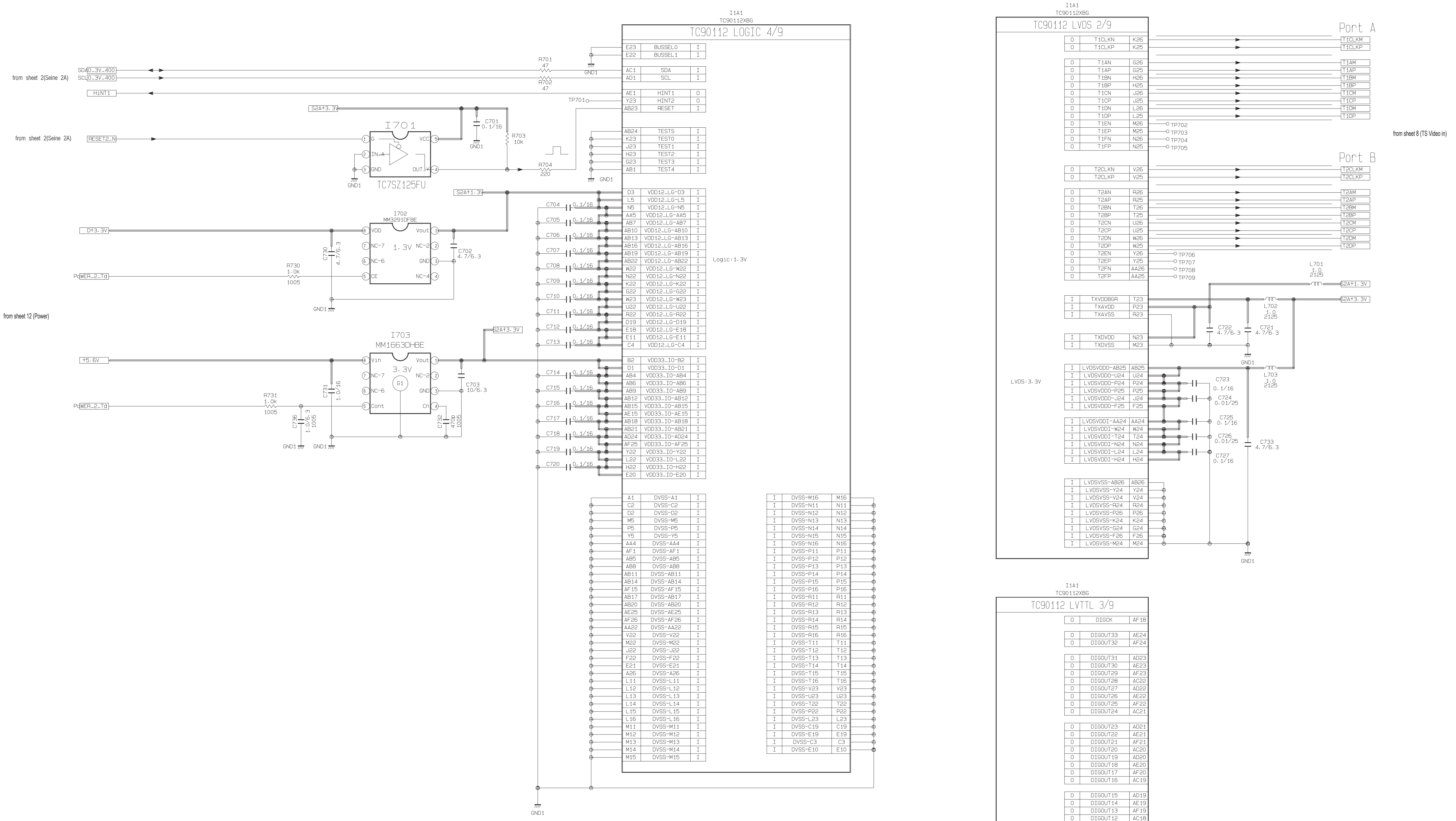
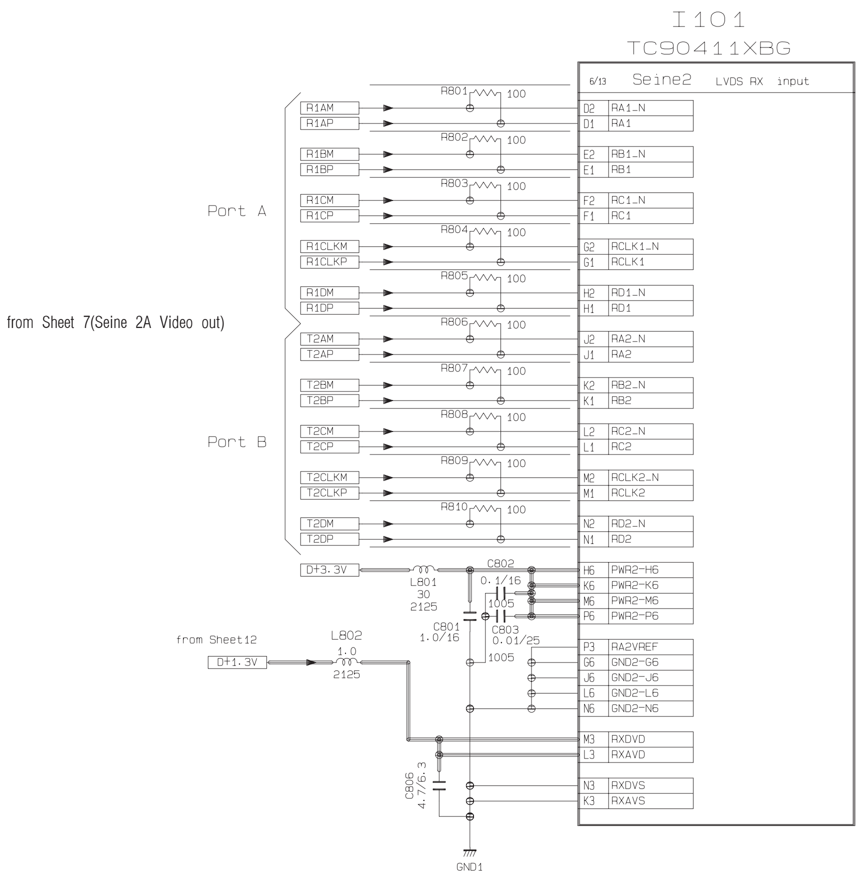

I1A1
TC90112XBG
TC90112 LOGIC 4/9
Logic:1.3V
from sheet 2(Seine 2A)
from sheet 2(Seine 2A)
from sheet 12 (Power)
I701
TC7SZ125FU
I702
MM3291DFBE
1.3V
I703
MM1663DHBE
3.3V
S2A+3.3V
S2A+1.3V
D+3.3V
+5.6V
POWER_2_Td
RESET2_N
HINT1
SDA0_3V_400
SCL0_3V_400
GND1
TC90112 LVDS 2/9
LVDS:3.3V
Port A
Port B
from sheet 8 (TS Video in)
L701
L702
L703
TC90112 LVTTL 3/9

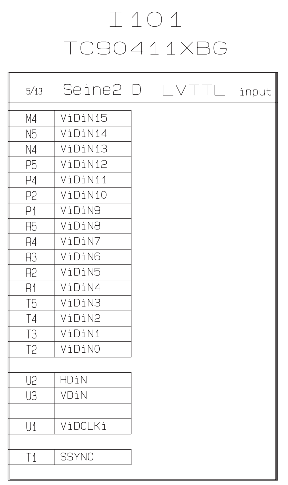
MAIN BOARD SHEET: 007
Seine 2A/Video Out

LVDS· LVTTL I/F

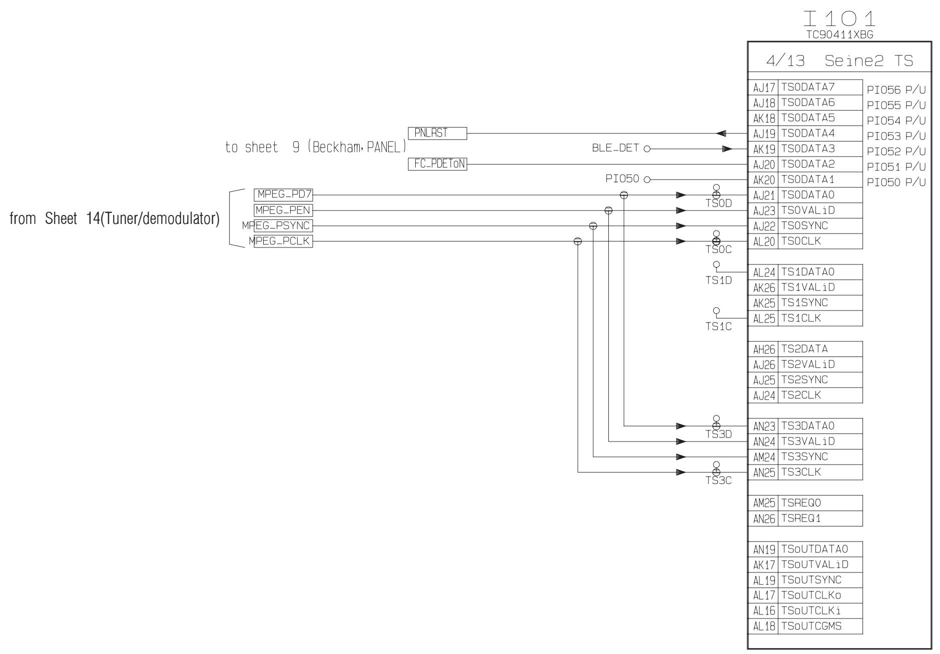
LVDS Input


I101
TC90411XBG
6/13 Seine2 LVDS RX input
from Sheet 7(Seine 2A Video out)
Port A
Port B
R1AM
R1AP
R1BM
R1BP
R1CM
R1CP
R1CLKM
R1CLKP
R1DM
R1DP
T2AM
T2AP
T2BM
T2BP
T2CM
T2CP
T2CLKM
T2CLKP
T2DM
T2DP
R801 100
R802 100
R803 100
R804 100
R805 100
R806 100
R807 100
R808 100
R809 100
R810 100
D2 RA1_N
D1 RA1
E2 RB1_N
E1 RB1
F2 RC1_N
F1 RC1
G2 RCLK1_N
G1 RCLK1
H2 RD1_N
H1 RD1
J2 RA2_N
J1 RA2
K2 RB2_N
K1 RB2
L2 RC2_N
L1 RC2
M2 RCLK2_N
M1 RCLK2
N2 RD2_N
N1 RD2
D+3.3V
L801 30 2125
C802 0.1/16 1005
C801 1.0/16
C803 0.01/25 1005
from Sheet12
D+1.3V
L802 1.0 2125
C806 4.7/6.3
GND1
H6 PWR2-H6
K6 PWR2-K6
M6 PWR2-M6
P6 PWR2-P6
P3 RA2VREF
G6 GND2-G6
J6 GND2-J6
L6 GND2-L6
N6 GND2-N6
M3 RXDVD
L3 RXAVD
N3 RXDVS
K3 RXAVS

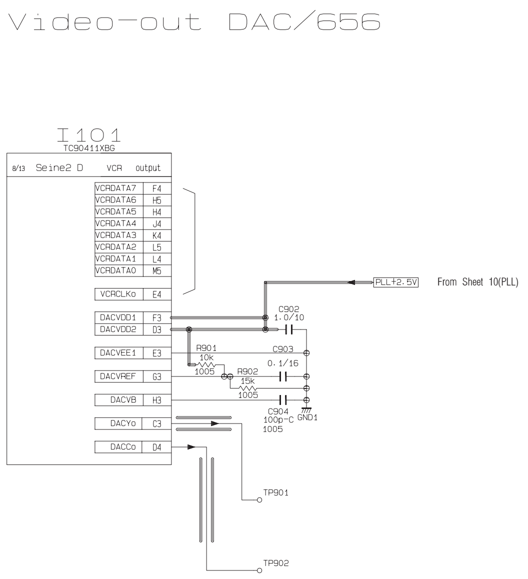
LVTTL Input

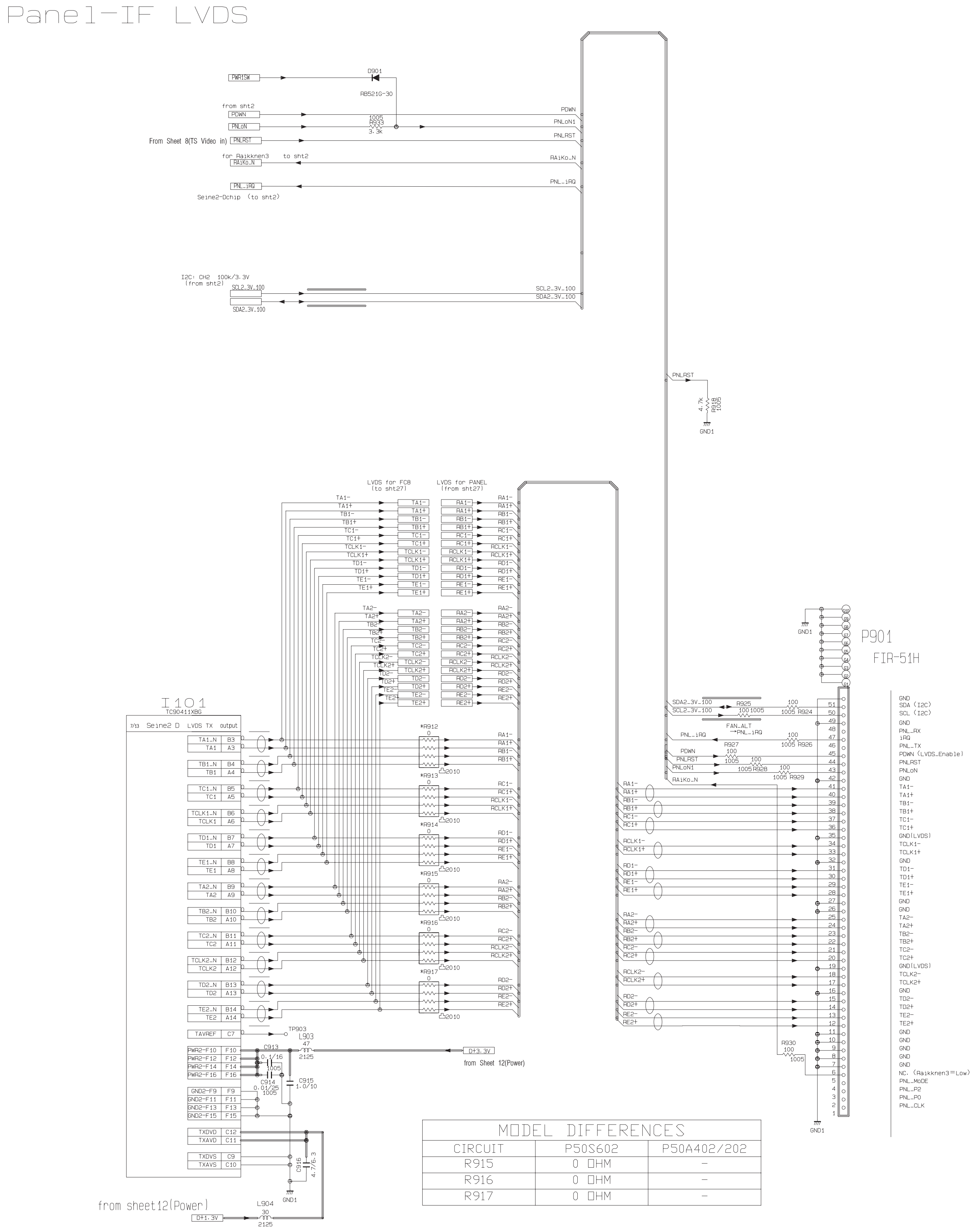

I101
TC90411XBG
5/13 Seine2 D LVTTL input
M4 ViDiN15
N5 ViDiN14
N4 ViDiN13
P5 ViDiN12
P4 ViDiN11
P2 ViDiN10
P1 ViDiN9
R5 ViDiN8
R4 ViDiN7
R3 ViDiN6
R2 ViDiN5
R1 ViDiN4
T5 ViDiN3
T4 ViDiN2
T3 ViDiN1
T2 ViDiN0
U2 HDiN
U3 VDiN
U1 ViDCLKi
T1 SSYNC

TS I/F


I101
TC90411XBG
4/13 Seine2 TS
to sheet 9 (Beckham,PANEL)
PNLRST
FC_PDEToN
BLE_DET
PI050
from Sheet 14(Tuner/demodulator)
MPEG_PD7
MPEG_PEN
MPEG_PSYNC
MPEG_PCLK
TS0D
TS0C
TS1D
TS1C
TS3D
TS3C
AJ17 TS0DATA7
AJ18 TS0DATA6
AK18 TS0DATA5
AJ19 TS0DATA4
AK19 TS0DATA3
AJ20 TS0DATA2
AK20 TS0DATA1
AJ21 TS0DATA0
AJ23 TS0VALiD
AJ22 TS0SYNC
AL20 TS0CLK
PI056 P/U
PI055 P/U
PI054 P/U
PI053 P/U
PI052 P/U
PI051 P/U
PI050 P/U
AL24 TS1DATA0
AK26 TS1VALiD
AK25 TS1SYNC
AL25 TS1CLK
AH26 TS2DATA
AJ26 TS2VALiD
AJ25 TS2SYNC
AJ24 TS2CLK
AN23 TS3DATA0
AN24 TS3VALiD
AM24 TS3SYNC
AN25 TS3CLK
AM25 TSREQ0
AN26 TSREQ1
AN19 TSoUTDATA0
AK17 TSoUTVALiD
AL19 TSoUTSYNC
AL17 TSoUTCLKo
AL16 TSoUTCLKi
AL18 TSoUTCGMS

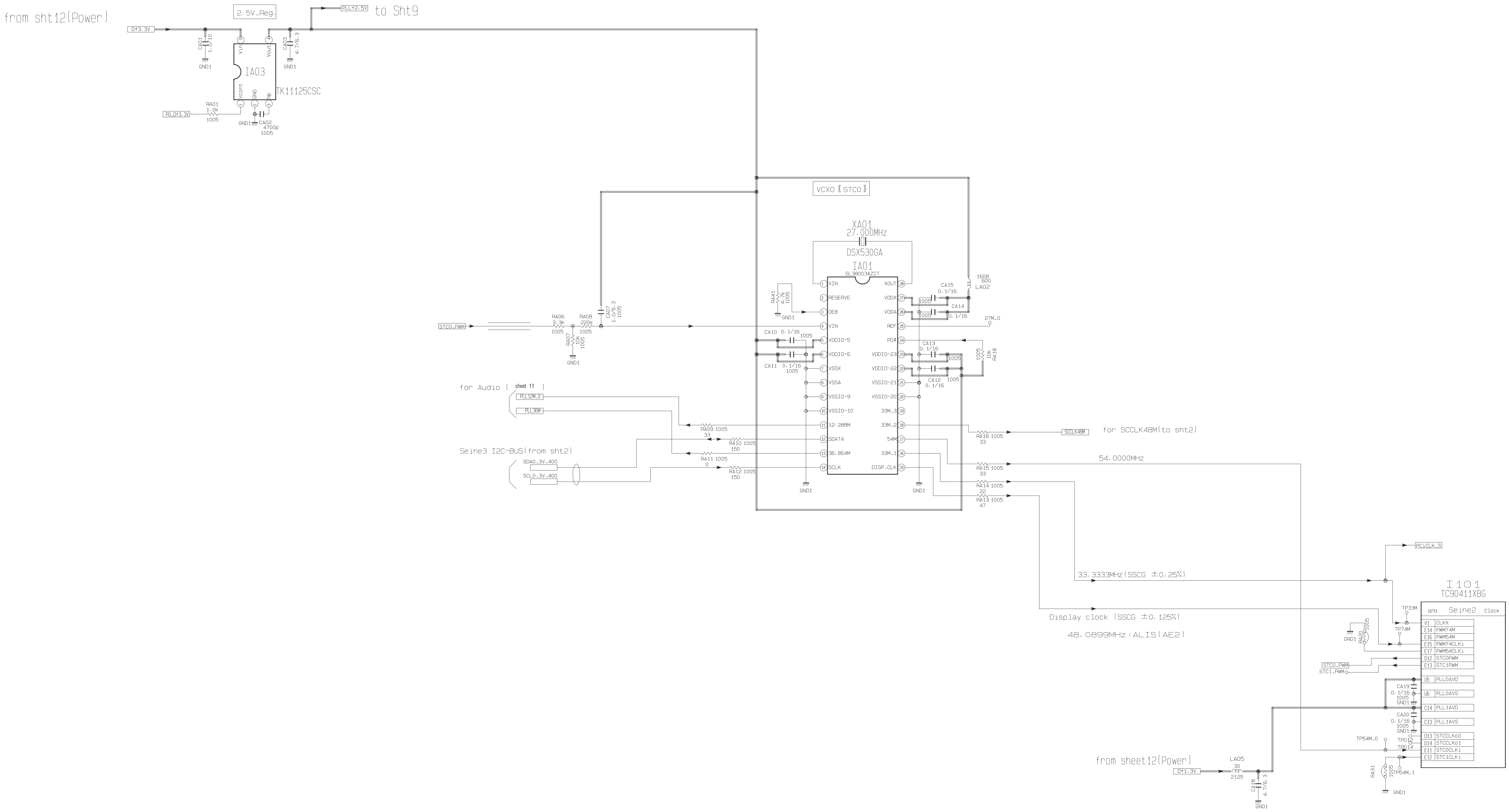
MAIN BOARD SHEET: 008
TS Video In


Video-out DAC/656
I101
TC90411XBG
8/13 Seine2 D VCR output
VCRDATA7 F4
VCRDATA6 H5
VCRDATA5 H4
VCRDATA4 J4
VCRDATA3 K4
VCRDATA2 L5
VCRDATA1 L4
VCRDATA0 M5
VCRCLKo E4
DACVDD1 F3
DACVDD2 D3
DACVEE1 E3
DACVREF G3
DACVB H3
DACYo C3
DACCo D4
PLL+2.5V
From Sheet 10(PLL)
C902 1.0/10
R901 10k 1005
C903 0.1/16
R902 15k 1005
C904 100p-C 1005
GND1
TP901
TP902

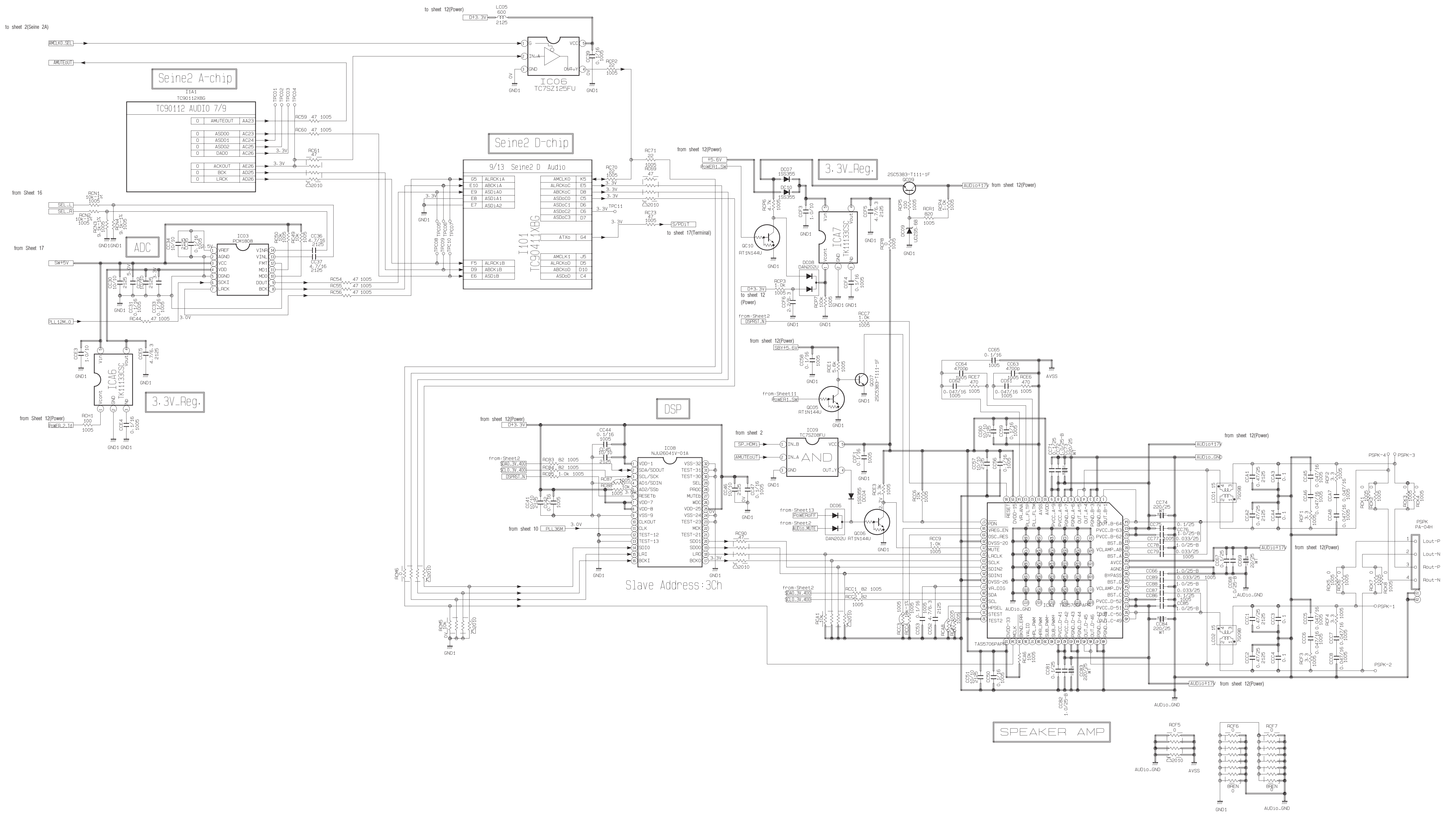

Panel-IF LVDS
PWR1SW
D901
RB521G-30
from sht2
PDWN
PNLoN
1005 R933 3.3k
From Sheet 8(TS Video in)
PNLRST
for Raikknen3 to sht2
RAiKo_N
PNL_iRQ
Seine2-Dchip (to sht2)
PNLoN1
I2C: CH2 100k/3.3V
(from sht2)
SCL2_3V_100
SDA2_3V_100
4.7k R918 1005
GND1
LVDS for FCB (to sht27)
LVDS for PANEL (from sht27)
I101
TC90411XBG
7/13 Seine2 D LVDS TX output
TA1_N B3
TA1 A3
TB1_N B4
TB1 A4
TC1_N B5
TC1 A5
TCLK1_N B6
TCLK1 A6
TD1_N B7
TD1 A7
TE1_N B8
TE1 A8
TA2_N B9
TA2 A9
TB2_N B10
TB2 A10
TC2_N B11
TC2 A11
TCLK2_N B12
TCLK2 A12
TD2_N B13
TD2 A13
TE2_N B14
TE2 A14
TAVREF C7
TP903
L903 47 2125
D+3.3V
from Sheet 12(Power)
C913 0.1/16 1005
C914 0.01/25 1005
C915 1.0/10
C916 4.7/6.3
GND1
TXDVD C12
TXAVD C11
TXDVS C9
TXAVS C10
from sheet12(Power)
D+1.3V
L904 30 2125
*R912 0
*R913 0
*R914 0
*R915 0
*R916 0
*R917 0
2010
R925 100 1005
R924 100 1005
FAN_ALT
R926 100 1005
R927 100 1005
R928 100 1005
R929 100 1005
R930 100 1005
P901
FIR-51H
GND1
GND
SDA (I2C)
SCL (I2C)
GND
PNL_RX
iRQ
PNL_TX
PDWN (LVDS_Enable)
PNLRST
PNLoN
GND
TA1-
TA1+
TB1-
TB1+
TC1-
TC1+
GND(LVDS)
TCLK1-
TCLK1+
GND
TD1-
TD1+
TE1-
TE1+
GND
GND
TA2-
TA2+
TB2-
TB2+
TC2-
TC2+
GND(LVDS)
TCLK2-
TCLK2+
GND
TD2-
TD2+
TE2-
TE2+
GND
GND
GND
GND
GND
NC. (Raikknen3=Low)
PNL_MoDE
PNL_P2
PNL_P0
PNL_CLK

MODEL DIFFERENCES		
CIRCUIT	P50S602	P50A402/202
R915	0 OHM	-
R916	0 OHM	-
R917	0 OHM	-

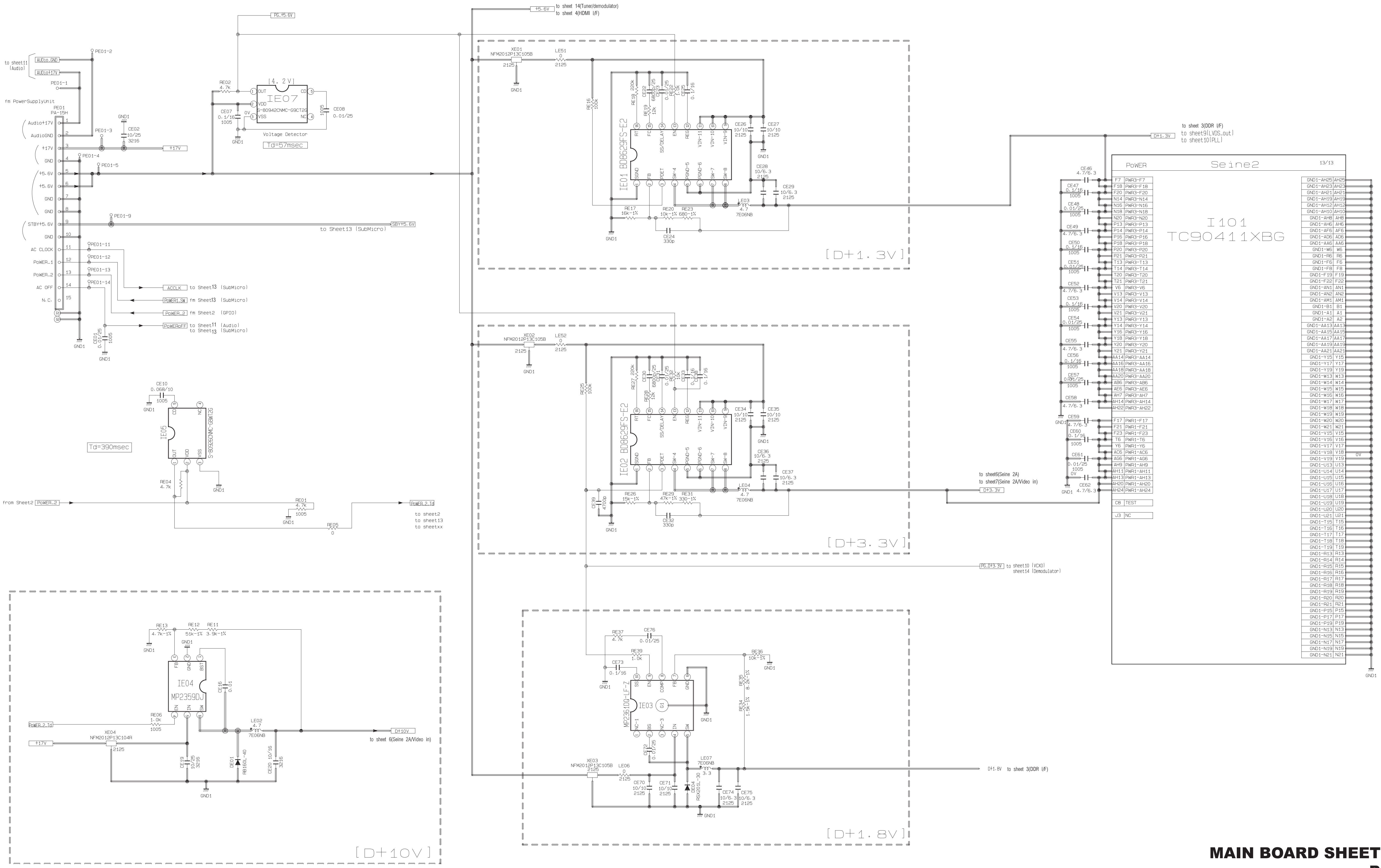
MAIN BOARD SHEET: 009
Video Out, Panel I/F


from sht12(Power)
D+3.3V
CA01
1.0/10
GND1
2.5V_Reg.
Vin
Vout
IA03
TK11125CSC
Vcont
GND
Np
RA01
1.0k
1005
PG_D+3.3V
GND1
CA02
4700p
1005
CA03
4.7/6.3
GND1
PLL+2.5V
to Sht9
VCXO【STCO】
XA01
27.000MHz
DSX530GA
IA01
SL38003AZCT
XIN
RESERVE
OEB
VIN
VDDIO-5
VDDIO-6
VSSX
VSSA
VSSIO-9
VSSIO-10
12.288M
SDATA
36.864M
SCLK
XOUT
VDDX
VDDA
REF
PD#
VDDIO-23
VDDIO-22
VSSIO-21
VSSIO-20
33M_3
33M_2
54M
33M_1
DISP_CLK
RA41
4.7k
1005
GND1
CA10 0.1/16 1005
CA11 0.1/16 1005
CA15 0.1/16
CA14 0.1/16
1005
1608
600
LA02
27M_0
CA13 0.1/16
CA12 0.1/16
RA18 10k 1005
GND1
STCO_PWM
RA06 3.3k 1005
RA07 10k 1005
RA08 220k 1005
CA07 1.0/6.3 1005
GND1
for Audio (sheet 11)
PLL12M_0
PLL36M
RA09 1005 33
RA10 1005 150
RA11 1005 0
RA12 1005 150
Seine3 I2C-BUS(from sht2)
SDA0_3V_400
SCL0_3V_400
RA16 1005 33
SCCLK48M
for SCCLK48M(to sht2)
54.0000MHz
RA15 1005 33
RA14 1005 22
RA13 1005 47
33.3333MHz(SSCG ±0.25%)
Display clock (SSCG ±0.125%)
48.0899MHz:ALIS(AE2)
PCiCLK_S
I101
TC90411XBG
12/13 Seine2 Clock
TP33M
TP74M
RA20 1005
GND1
V1 CLKX
E14 PWM74M
E16 PWM54M
E15 PWM74CLKi
E17 PWM54CLKi
D12 STC0PWM
E13 STC1PWM
STC0_PWM
STC1_PWM
U5 PLL0AVD
U6 PLL0AVS
C14 PLL1AVD
C13 PLL1AVS
D13 STCCLKo0
D14 STCCLKo1
E11 STC0CLKi
E12 STC1CLKi
CA19 0.1/16 1005 GND1
CA20 0.1/16 1005 GND1
TP54M_0
TP012
TP014
TP54M_1
RA31 1005
GND1
from sheet12(Power)
D+1.3V
LA05
30
2125
CA18
4.7/6.3
GND1

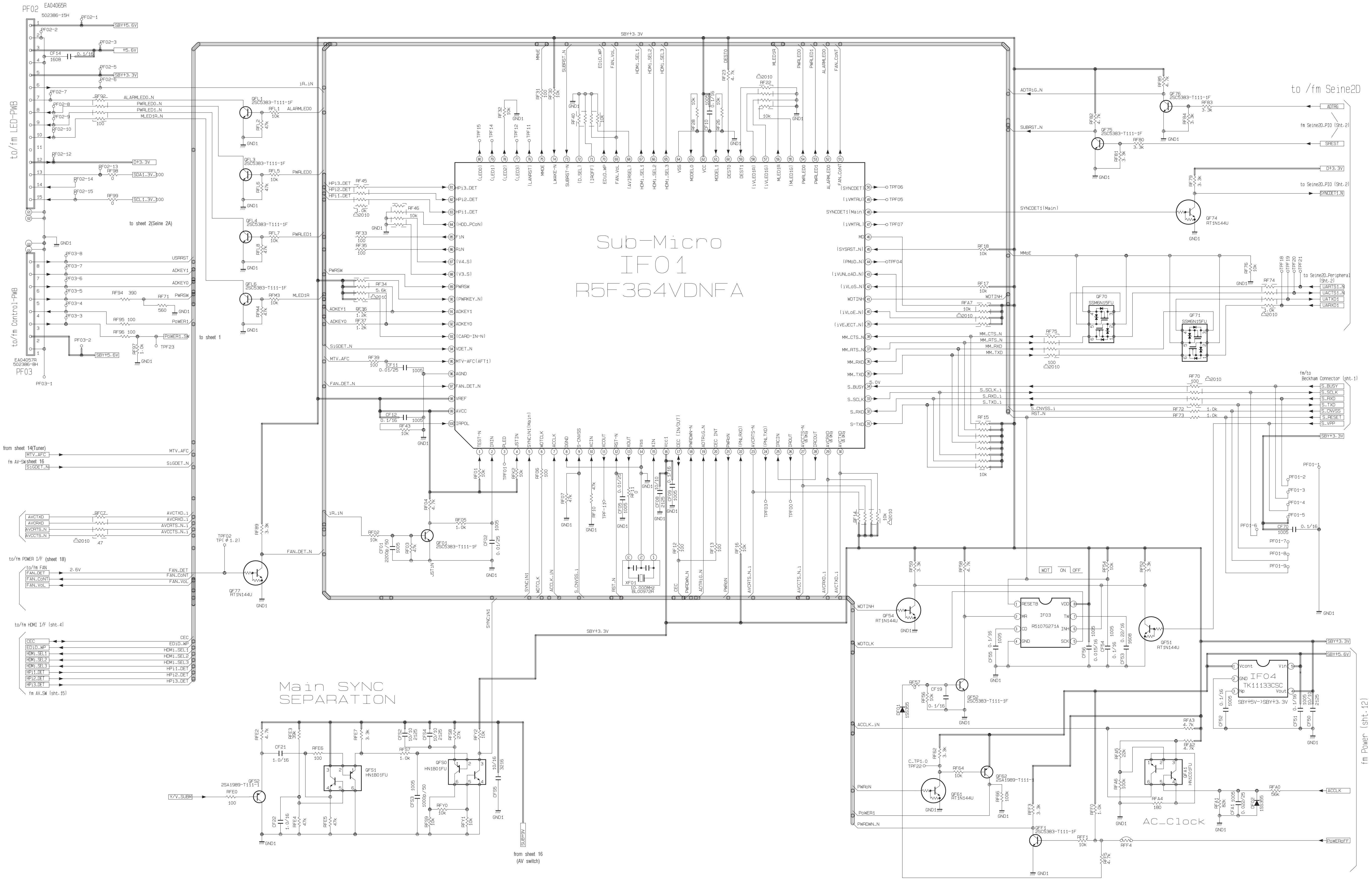
MAIN BOARD SHEET: 010
VCXO, PLL


to sheet 2(Seine 2A)
to sheet 12(Power)
Seine2 A-chip
TC90112 AUDIO 7/9
Seine2 D-chip
9/13 Seine2 D Audio
TC90411XBG
IC06
TC7SZ125FU
ADC
IC03
PCM1808
3.3V_Reg.
ICA6
TK11133CSC
ICA7
DSP
IC08
NJU26041V-01A
Slave Address:3Ch
IC09
TC7SZ08FU
AND
2SC5383-T111-1F
RT1N144U
DAN202U
1SS355
from Sheet 16
from Sheet 17
from sheet 12(Power)
to sheet 17(Terminal)
AUDio+17V
TAS5706PAP
SPEAKER AMP
PSPK
PA-04H
Lout-P
Lout-N
Rout-P
Rout-N
AUDio_GND
AVSS
GND1

MAIN BOARD SHEET: 011
Audio


to sheet 14(Tuner/demodulator)
to sheet 4(HDMI I/F)
+5.6V
PG_+5.6V
to sheet11 (Audio)
AUDio_GND
AUDio+17V
fm PowerSupplyUnit
PE01 PA-15H
Audio+17V
AudioGND
+17V
GND
+5.6V
STBY+5.6V
AC CLOCK
PoWER_1
PoWER_2
AC OFF
N.C.
PE01-2
PE01-1
PE01-3
PE01-4
PE01-5
PE01-9
PE01-11
PE01-12
PE01-13
PE01-14
CE02 10/25 3216
CE01 0.01/25 1005
GND1
to Sheet13 (SubMicro)
SBY+5.6V
ACCLK
to Sheet13 (SubMicro)
PoWER1_SW
fm Sheet13 (SubMicro)
PoWER_2
fm Sheet2 (GPIO)
PoWERoFF
to Sheet11 (Audio)
to Sheet13 (SubMicro)
RE02 4.7k
[4.2V]
IE07
S-80942CNMC-G9CT2G
OUT
VDD
VSS
CD
NC
CE07 0.1/16 1005
CE08 0.01/25
Voltage Detector
Td=57msec
CE10 0.068/10 1005
IE05
S-80950CNMC-G6WT2G
Td=390msec
RE04 4.7k
from Sheet2 PoWER_2
RE01 4.7k 1005
RE05 0
PoWER_2_Td
to sheet2
to sheet13
to sheetxx
XE01 NFM2012P13C105B 2125
LE51 0 2125
RE16 100k
RE18 220k
RE19 12k
CE22 680p/25
CE23 0.01/25
RE21 100k
CE25 0.1/16
IE01 BD8629FS-E2
RT
FC
SS/DELAY
EN
REG
VIN-11
VIN-10
VIN-9
SGND
FB
PDET
SW-4
PGND-5
PGND-6
SW-7
SW-8
CE26 10/10 2125
CE27 10/10 2125
CE28 10/6.3 2125
CE29 10/6.3 2125
LE03 4.7 7E06NB
RE17 16k-1%
RE20 10k-1%
RE23 680-1%
CE24 330p
[D+1.3V]
XE02 NFM2012P13C105B 2125
LE52 0 2125
RE25 100k
RE27 220k
RE28 12k
IE02 BD8629FS-E2
CE34 10/10 2125
CE35 10/10 2125
CE36 10/6.3 2125
CE37 10/6.3 2125
LE04 4.7 7E06NB
RE26 15k-1%
RE29 47k-1%
RE31 330-1%
CE32 330p
CE38 4700p
[D+3.3V]
to sheet6(Seine 2A)
to sheet7(Seine 2A/Video in)
D+3.3V
PG_D13.3V
to sheet10 (VCXO)
sheet14 (Demodulator)
to sheet 3(DDR I/F)
to sheet9(LVDS_out)
to sheet10(PLL)
D+1.3V
I101
TC90411XBG
PoWER
Seine2
13/13
TEST
NC
RE13 4.7k-1%
RE12 51k-1%
RE11 3.9k-1%
IE04
MP2359DJ
FB
GND
BST
EN
IN
SW
CE16 0.01
RE06 1.0k 1005
XE04 NFM2012P13C104R 2125
LE02 4.7 7E06NB
D+10V
to sheet 6(Seine 2A/Video in)
PoWER_2_Td
+17V
CE19 10/25 3216
DE01 RB160L-40
CE20 10/16 3216
[D+10V]
RE37 4.7k
CE76 0.01/25
RE39 1.0k
CE73 0.1/16
RE36 10k-1%
RE35 8.2k-1%
RE34 1.5k-1%
MP2361DD-LF-Z
IE03
SS
EN
COMP
FB
GND
NC-1
BS
NC-3
IN
SW
CE72 0.01/25
XE03 NFM2012P13C105B 2125
LE06 0 2125
LE07 7E06NB 3.3
CE70 10/10 2125
CE71 10/10 2125
DE04 RSX201L-30
CE74 10/6.3 2125
CE75 10/6.3 2125
D+1.8V
to sheet 3(DDR I/F)
[D+1.8V]

MAIN BOARD SHEET: 012
Power


Sub-Micro
IF01
R5F364VDNFA
SBY+3.3V
PF02 EA04065R 502386-15H
PF03 EA04057R 502386-8H
to/fm LED-PWB
to/fm Control-PWB
to sheet 2(Seine 2A)
to sheet 1
to /fm Seine2D
fm Seine2D,PIO (Sht.2)
to Seine2D,PIO (Sht.2)
to Seine2D,Peripheral (Sht.2)
fm/to Beckham Connector (sht.1)
from sheet 14(Tuner)
fm AV-SW sheet 16
to/fm POWER I/F (sheet 18)
to/fm HDMI I/F (sht.4)
fm AV_SW (sht.15)
Main SYNC SEPARATION
from sheet 16 (AV switch)
XF01 10.000MHz BL00972R
IF03 R5107G271A
IF04 TK11133CSC
SBY+5V->SBY+3.3V
AC_Clock
fm Power (sht.12)
QF70 SSM6N15FU
QF71 SSM6N15FU
QF74 RT1N144U
QF77 RT1N144U
QFS1 HN1B01FU
QF50 HN1B01FU
QFA1 HN1C01FU
WDT ON OFF

MAIN BOARD SHEET: 013
Sub-Micro

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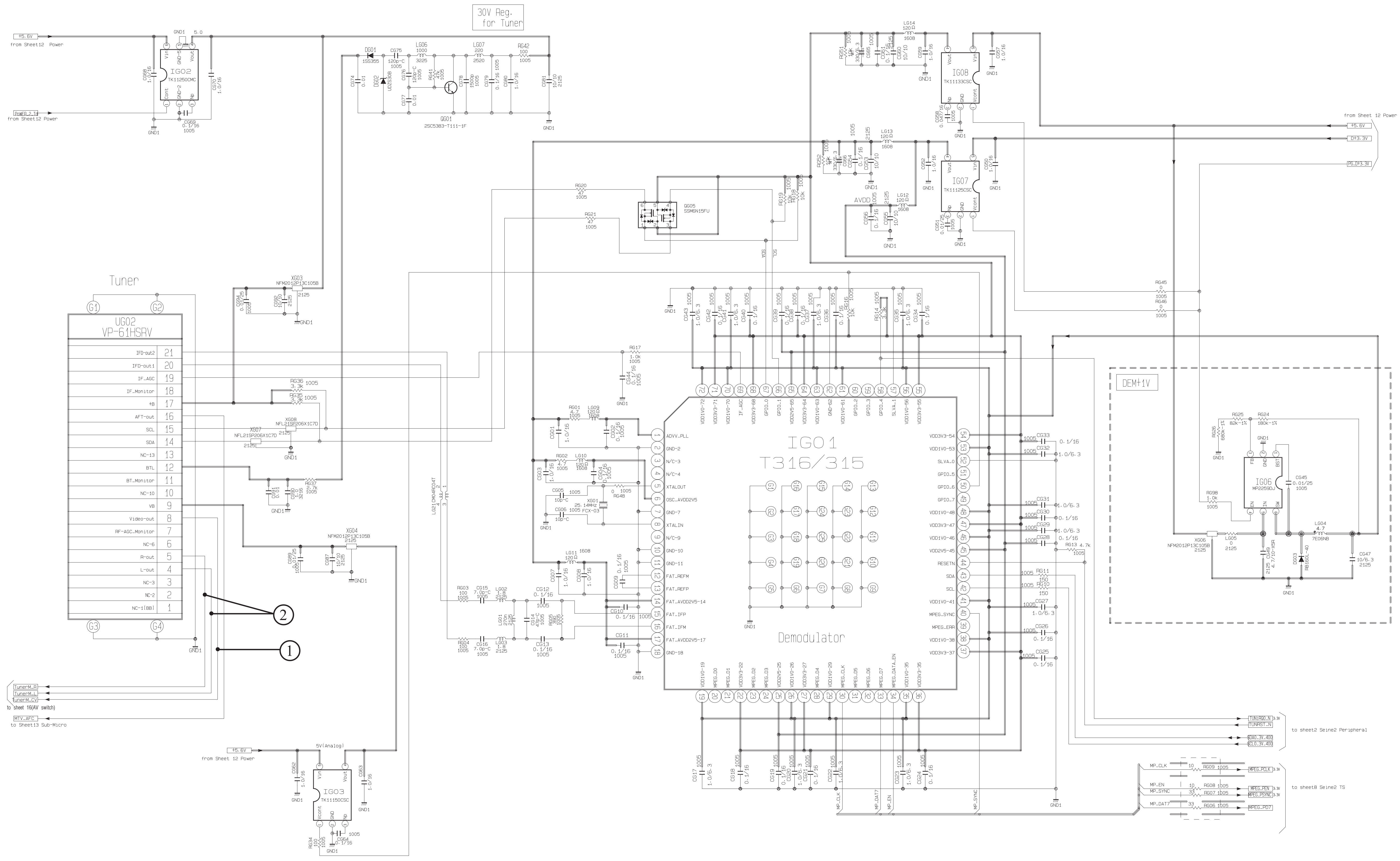
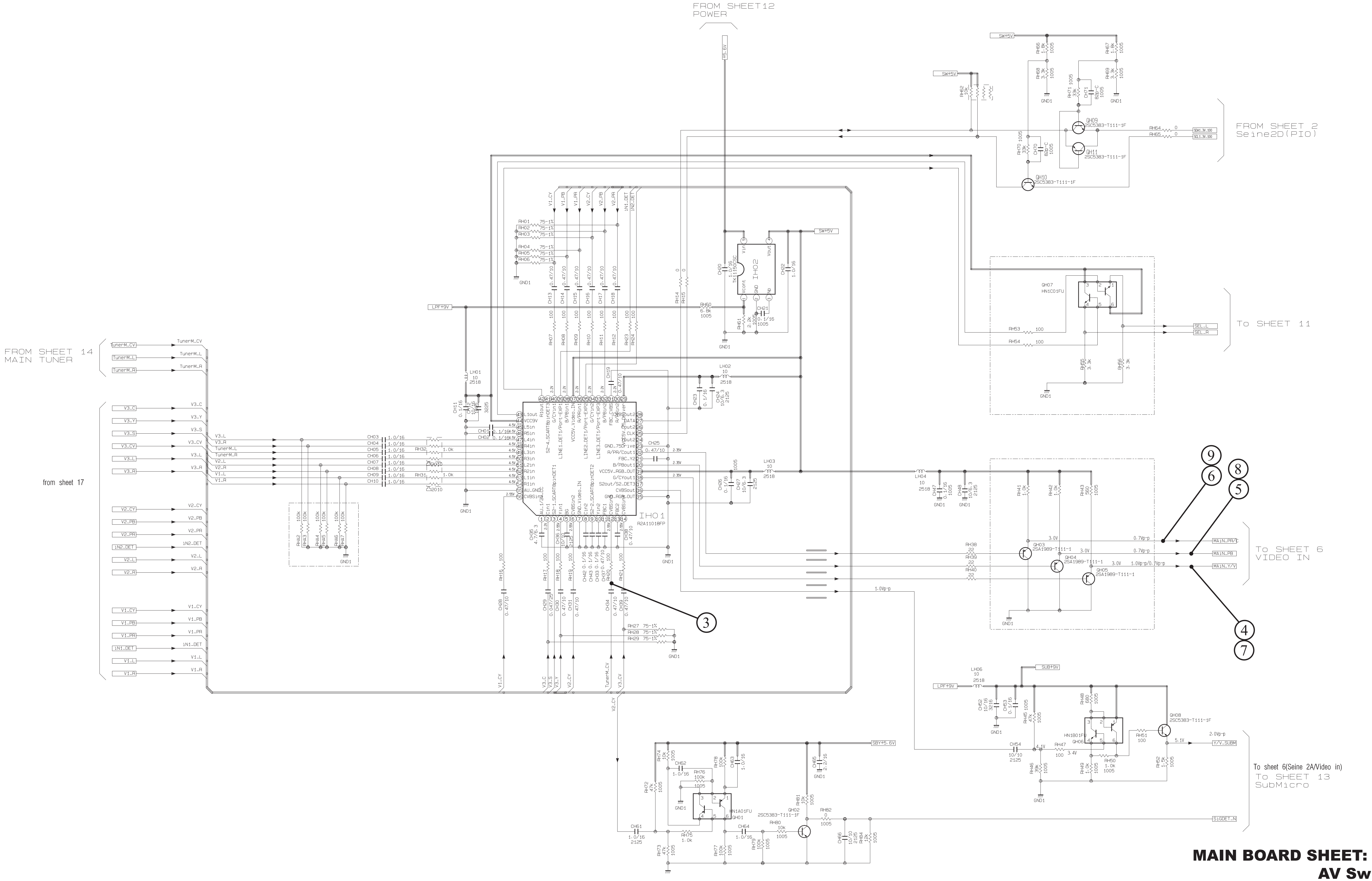

30V Reg.
for Tuner
+5.6V
from Sheet12 Power
POWER_2_1
from Sheet12 Power
IG02
TK11250CMC
GND1
5.0
DG01
1SS355
DG02
UDZS30B
QG01
2SC5383-T111-1F
LG06
LG07
RG42
Tuner
UG02
VP-61HSRV
IFD-out2
IFD-out1
IF_AGC
IF_Monitor
+B
AFT-out
SCL
SDA
NC-13
BTL
BT_Monitor
NC-10
VB
Video-out
RF-AGC_Monitor
NC-6
R-out
L-out
NC-3
NC-2
NC-1(BB)
G1
G2
G3
G4
XG03
NFM2012P13C105B
XG04
NFM2012P13C105B
XG07
NFL21SP206X1C7D
XG08
NFL21SP206X1C7D
2
1
TunerM_R
TunerM_L
TunerM_CV
to sheet 16(AV switch)
MTV_AFC
to Sheet13 Sub-Micro
+5.6V
from Sheet 12 Power
5V(Analog)
IG03
TK11150CSC
RG34
CG64
QG05
SSM6N15FU
IG08
TK11133CSC
IG07
TK11125CSC
AVDD
LG12
LG13
LG14
from Sheet 12 Power
+5.6V
D+3.3V
PG_D+3.3V
XG01
25.14MHz
FCX-03
IG01
T316/315
Demodulator
ADVV_PLL
GND-2
N/C-3
N/C-4
XTALOUT
OSC_AVDD2V5
GND-7
XTALIN
N/C-9
GND-10
GND-11
FAT_REFM
FAT_REFP
FAT_AVDD2V5-14
FAT_IFP
FAT_IFM
FAT_AVDD2V5-17
GND-18
VDD3V3-54
VDD1V0-53
SLVA_0
GPIO_5
GPIO_6
GPIO_7
VDD1V0-48
VDD3V3-47
VDD1V0-46
VDD2V5-45
RESETN
SDA
SCL
VDD1V0-41
MPEG_SYNC
MPEG_ERR
VDD1V0-38
VDD3V3-37
DEM+1V
IG06
MP2259DJ
XG06
NFM2012P13C105B
LG04
7E06NB
DG03
RB160L-40
TUNiRQ0_N
TUNRST_N
SDA0_3V_400
SCL0_3V_400
to sheet2 Seine2 Peripheral
MP_CLK
MP_EN
MP_SYNC
MP_DAT7
RG09
RG08
RG07
RG06
MPEG_PCLK
MPEG_PEN
MPEG_PSYNC
MPEG_PD7
3.3V
to sheet8 Seine2 TS

Tuner mode	GPIO _6	9pin A5/D0		
Analog	H	5V		
Digital	L	0V		
standby	L	0V		

MAIN BOARD SHEET: 014
Tuner/Demodulator

TABLE OF CONTENTS


FROM SHEET12
POWER
FROM SHEET 2
Seine2D(PIO)
To SHEET 11
FROM SHEET 14
MAIN TUNER
from sheet 17
To SHEET 6
VIDEO IN
To sheet 6(Seine 2A/Video in)
To SHEET 13
SubMicro
IH01
R2A11018FP
IH02
QH01
QH02
QH03 2SA1989-T111-1
QH04 2SA1989-T111-1
QH05 2SA1989-T111-1
QH06
QH07 HN1C01FU
QH08 2SC5383-T111-1F
QH09 2SC5383-T111-1F
QH10 2SC5383-T111-1F
QH11 2SC5383-T111-1F
SW+5V
SBY+5.6V
SUB+9V
LPF+9V
MAIN_PR/C
MAIN_PB
MAIN_Y/V
Y/V_SUBM
SIGDET_M
SEL_L
SEL_R
GND1
3
4
5
6
7
8
9

MAIN BOARD SHEET: 016
AV Switch

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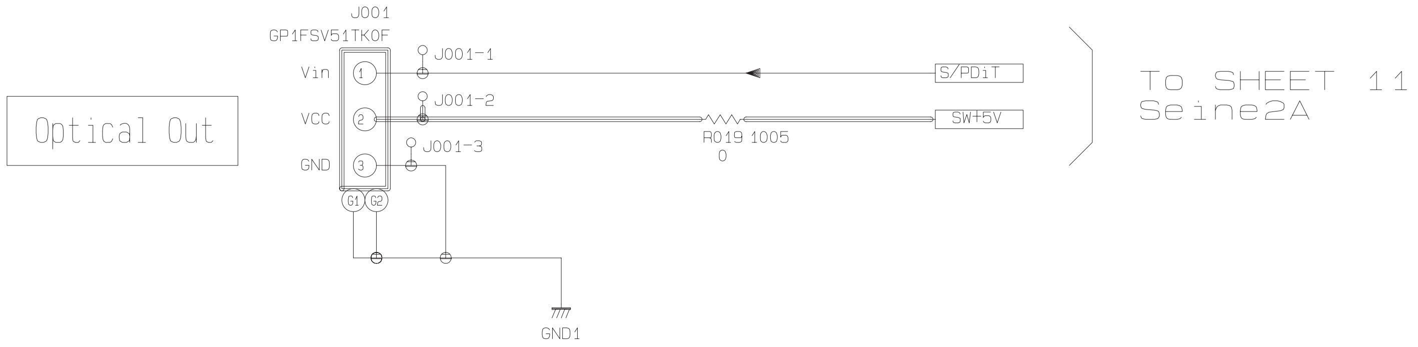
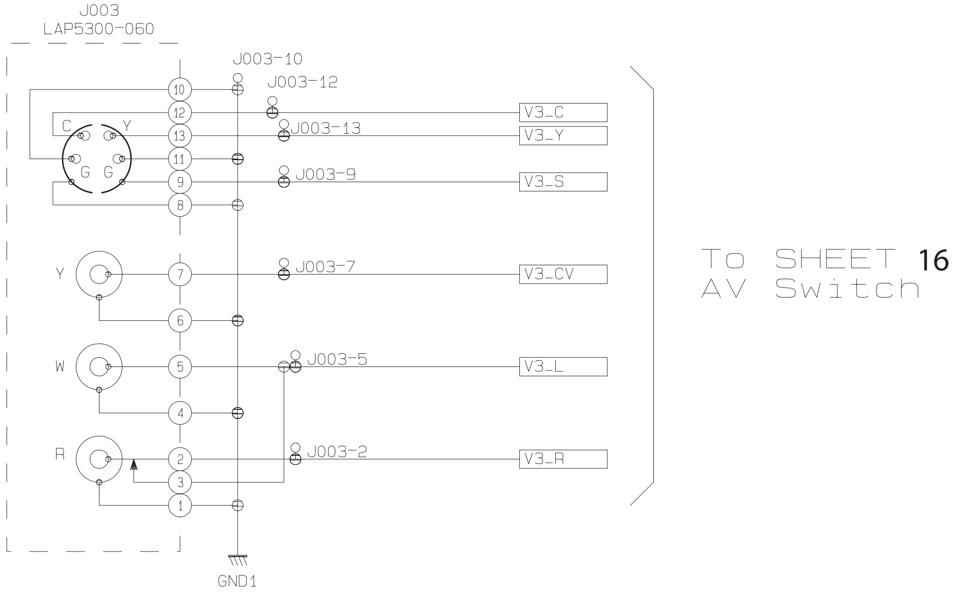
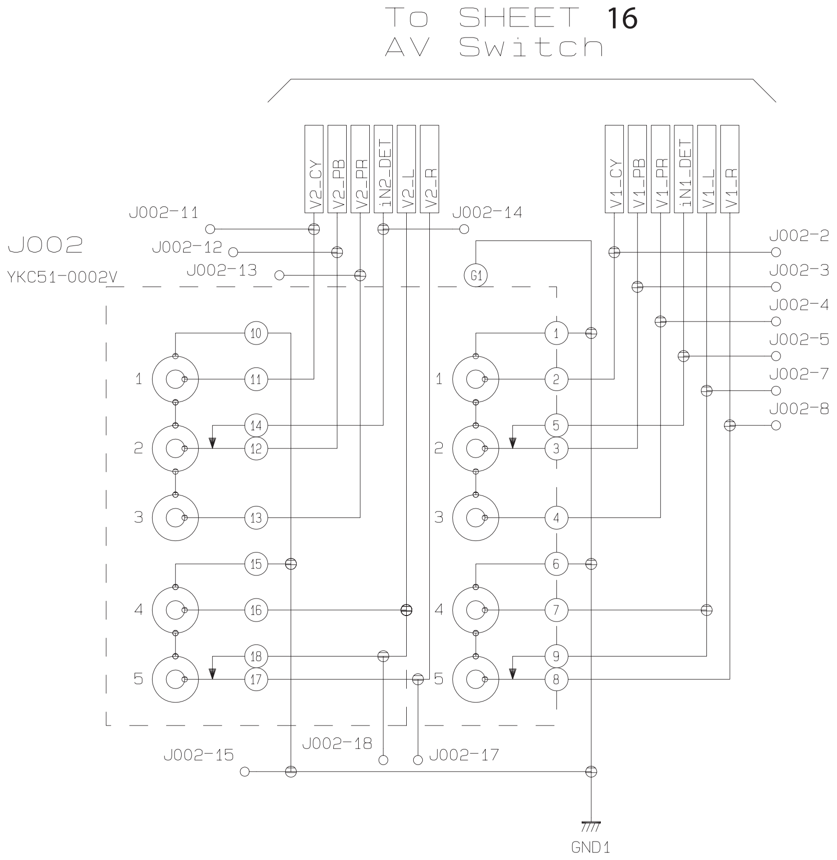
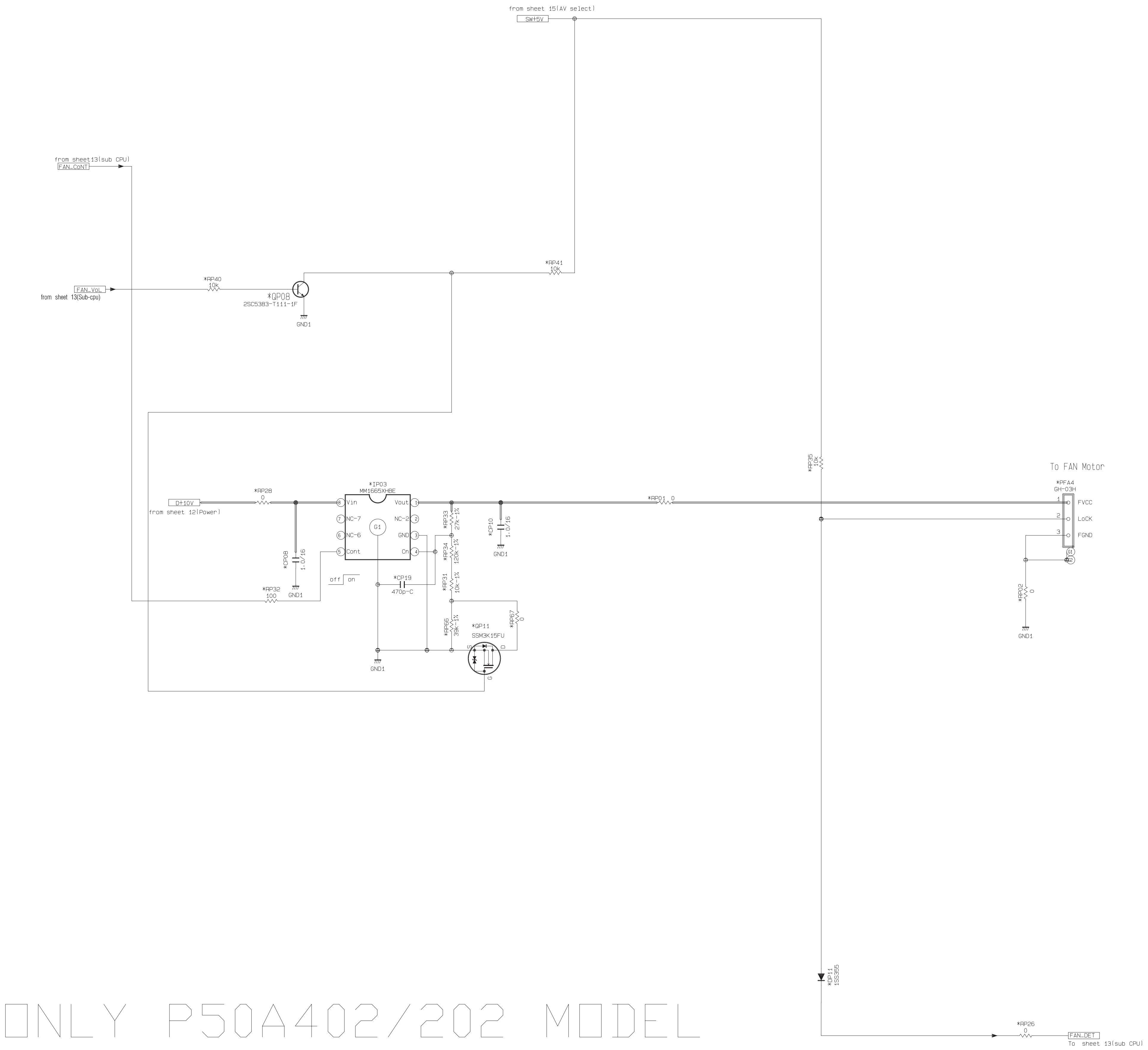

Optical Out
J001
GP1FSV51TK0F
Vin
VCC
GND
J001-1
J001-2
J001-3
G1
G2
S/PDiT
SW+5V
R019 1005
0
GND1
To SHEET 11
Seine2A


J003
LAP5300-060
J003-10
J003-12
J003-13
J003-9
J003-7
J003-5
J003-2
C
Y
G
G
Y
W
R
V3_C
V3_Y
V3_S
V3_CV
V3_L
V3_R
GND1
To SHEET 16
AV Switch

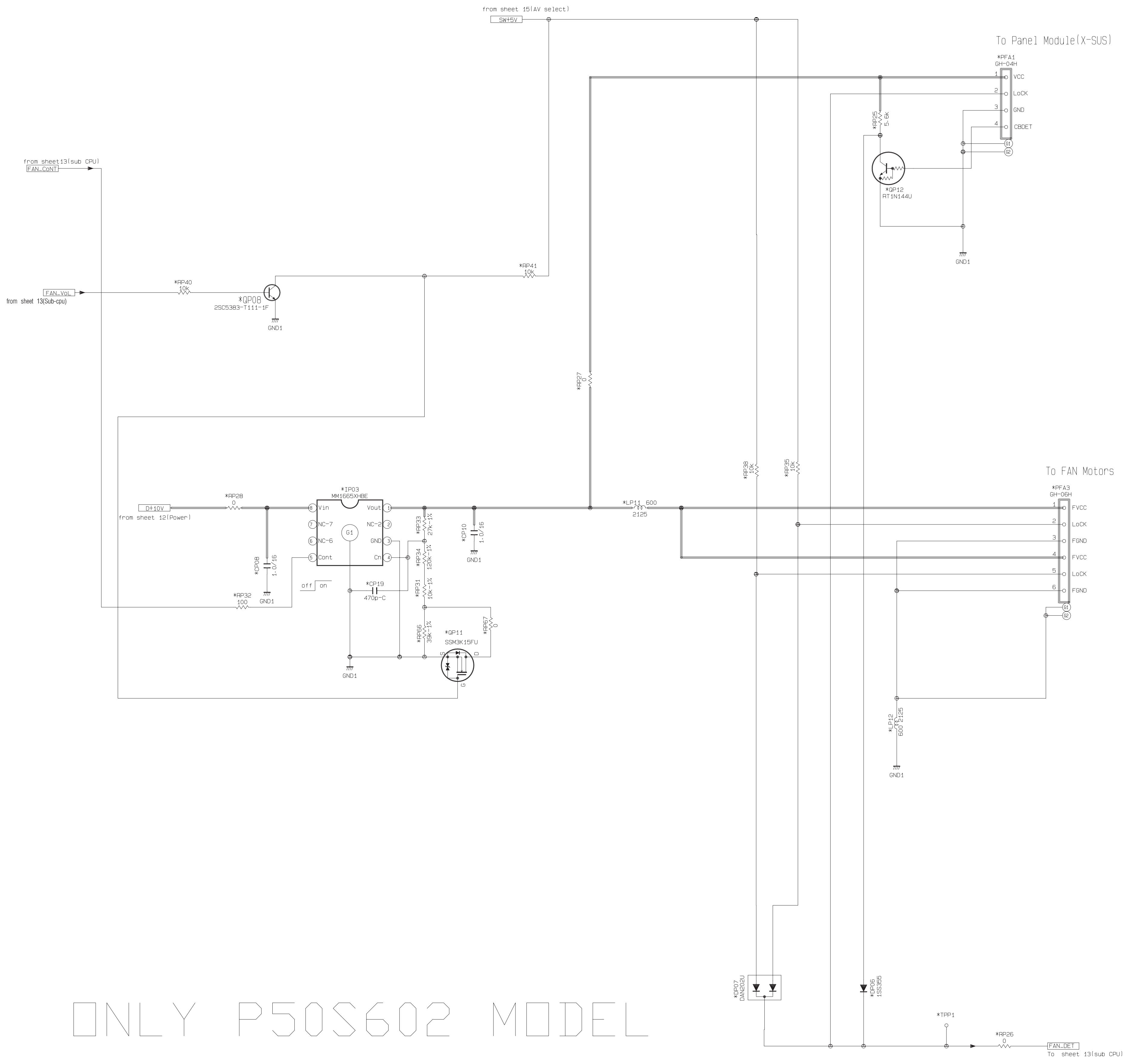

To SHEET 16
AV Switch
V2_CY
V2_PB
V2_PR
IN2_DET
V2_L
V2_R
V1_CY
V1_PB
V1_PR
IN1_DET
V1_L
V1_R
J002
YKC51-0002V
J002-11
J002-12
J002-13
J002-14
J002-2
J002-3
J002-4
J002-5
J002-7
J002-8
J002-15
J002-18
J002-17
G1
GND1

MAIN BOARD SHEET: 017
Terminal

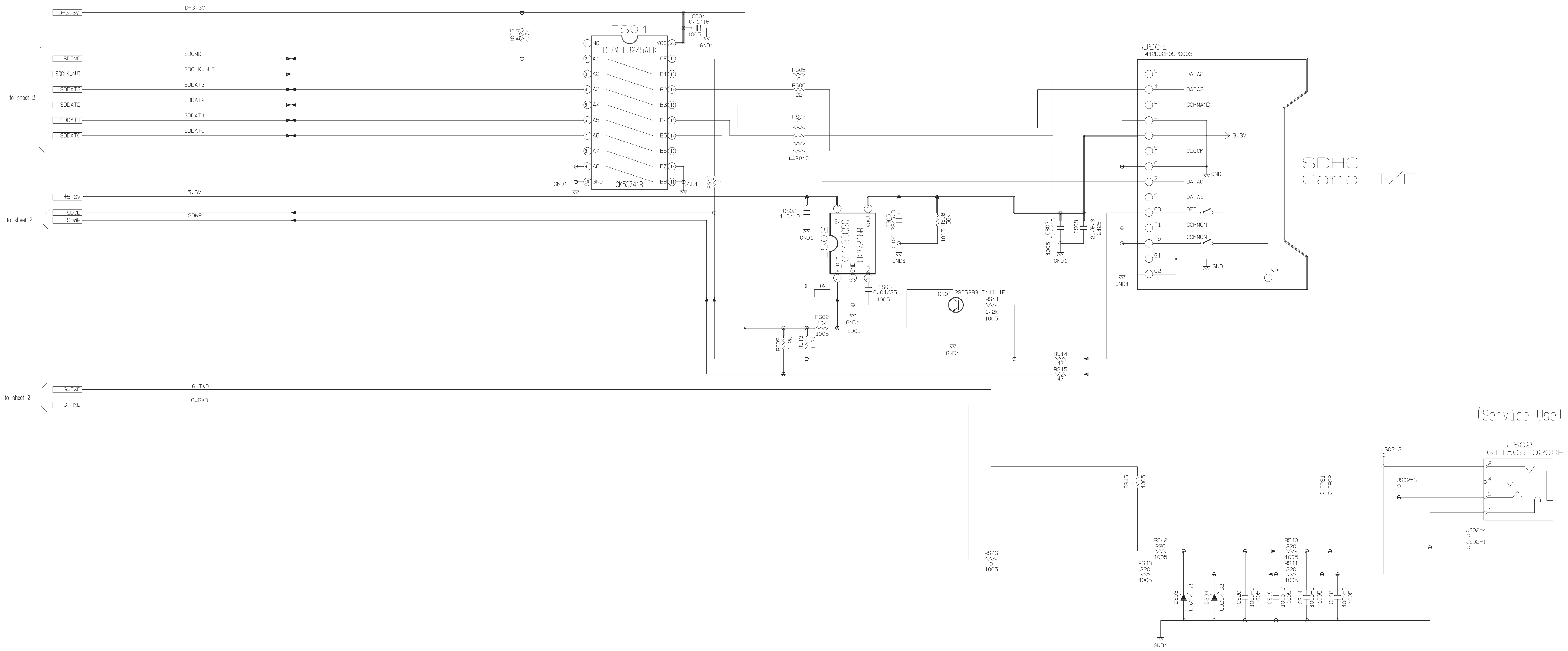

from sheet 15(AV select)
SW+5V
from sheet13(sub CPU)
FAN_CoNT
FAN_VoL
from sheet 13(Sub-cpu)
*RP40
10k
*QP08
2SC5383-T111-1F
GND1
*RP41
10k
*RP35
10k
To FAN Motor
*PFA4
GH-03H
1
2
3
FVCC
LoCK
FGND
G1
G2
*RP02
0
GND1
D+10V
from sheet 12(Power)
*RP28
0
*CP08
1.0/16
GND1
*IP03
MM1665XHBE
8 Vin
7 NC-7
6 NC-6
5 Cont
Vout 1
NC-2 2
GND 3
Cn 4
G1
*RP33
27k-1%
*RP34
120k-1%
*RP31
10k-1%
*RP66
39k-1%
*RP67
0
*CP10
1.0/16
GND1
*RP01 0
off
on
*CP19
470p-C
*RP32
100
GND1
GND1
*QP11
SSM3K15FU
S
D
G
*DP11
1SS355
*RP26
0
FAN_DET
To sheet 13(sub CPU)

ONLY P50A402/202 MODEL

MAIN BOARD SHEET: 018
Fan


from sheet 15(AV select)
SW+5V
To Panel Module(X-SUS)
*PFA1
GH-04H
1 VCC
2 LoCK
3 GND
4 CBDET
G1
G2
*RP25
5.6K
*QP12
RT1N144U
GND1
from sheet13(sub CPU)
FAN_CoNT
FAN_VoL
from sheet 13(Sub-cpu)
*RP40
10k
*QP08
2SC5383-T111-1F
GND1
*RP41
10k
*RP27
0
D+10V
from sheet 12(Power)
*RP28
0
*CP08
1.0/16
GND1
*IP03
MM1665XHBE
8 Vin
7 NC-7
6 NC-6
5 Cont
Vout 1
NC-2 2
GND 3
Cn 4
G1
off
on
*RP32
100
*CP19
470p-C
GND1
*RP33
27k-1%
*RP34
120k-1%
*RP31
10k-1%
*RP66
39k-1%
*RP67
0
*QP11
SSM3K15FU
S
D
G
*CP10
1.0/16
GND1
*LP11 600
2125
*RP38
10k
*RP35
10k
To FAN Motors
*PFA3
GH-06H
1 FVCC
2 LoCK
3 FGND
4 FVCC
5 LoCK
6 FGND
G1
G2
*LP12
600 2125
GND1
*DP07
DAN202U
*DP06
1SS355
*TPP1
*RP26
0
FAN_DET
To sheet 13(sub CPU)
ONLY P50S602 MODEL

MAIN BOARD SHEET: 018
Fan


D+3.3V
D+3.3V
to sheet 2
SDCMD
SDCLK_oUT
SDDAT3
SDDAT2
SDDAT1
SDDAT0
+5.6V
+5.6V
to sheet 2
SDCD
SDWP
to sheet 2
G_TXD
G_RXD
1005
RS04
4.7k
ISO1
TC7MBL3245AFK
CK53741R
NC
VCC
OE
A1
A2
A3
A4
A5
A6
A7
A8
GND
B1
B2
B3
B4
B5
B6
B7
B8
CS01
0.1/16
1005
GND1
GND1
GND1
RS10
0
RS05
0
RS06
22
RS07
0
2010
CS02
1.0/10
GND1
ISO2
TK11133CSC
CK37216R
Vin
Vout
Vcont
GND
Np
CS05
22/6.3
2125
GND1
RS08
56k
1005
CS07
0.1/16
1005
CS08
22/6.3
2125
GND1
OFF
ON
CS03
0.01/25
1005
GND1
SDCD
RS02
10k
1005
RS09
1.2k
RS13
1.2k
QS01
2SC5383-T111-1F
RS11
1.2k
1005
GND1
RS14
47
RS15
47
JS01
412D02F09PC003
DATA2
DATA3
COMMAND
3.3V
CLOCK
GND
DATA0
DATA1
CD
DET
T1
COMMON
T2
COMMON
G1
G2
GND
GND1
WP
SDHC
Card I/F
(Service Use)
JS02
LGT1509-0200F
JS02-2
JS02-3
JS02-4
JS02-1
TPS1
TPS2
RS45
0
1005
RS46
0
1005
RS42
220
1005
RS43
220
1005
RS40
220
1005
RS41
220
1005
DS03
UDZS4.3B
DS04
UDZS4.3B
CS20
100p-C
1005
CS19
100p-C
1005
CS14
100p-C
1005
CS18
100p-C
1005
GND1

MAIN BOARD SHEET: 029
SD

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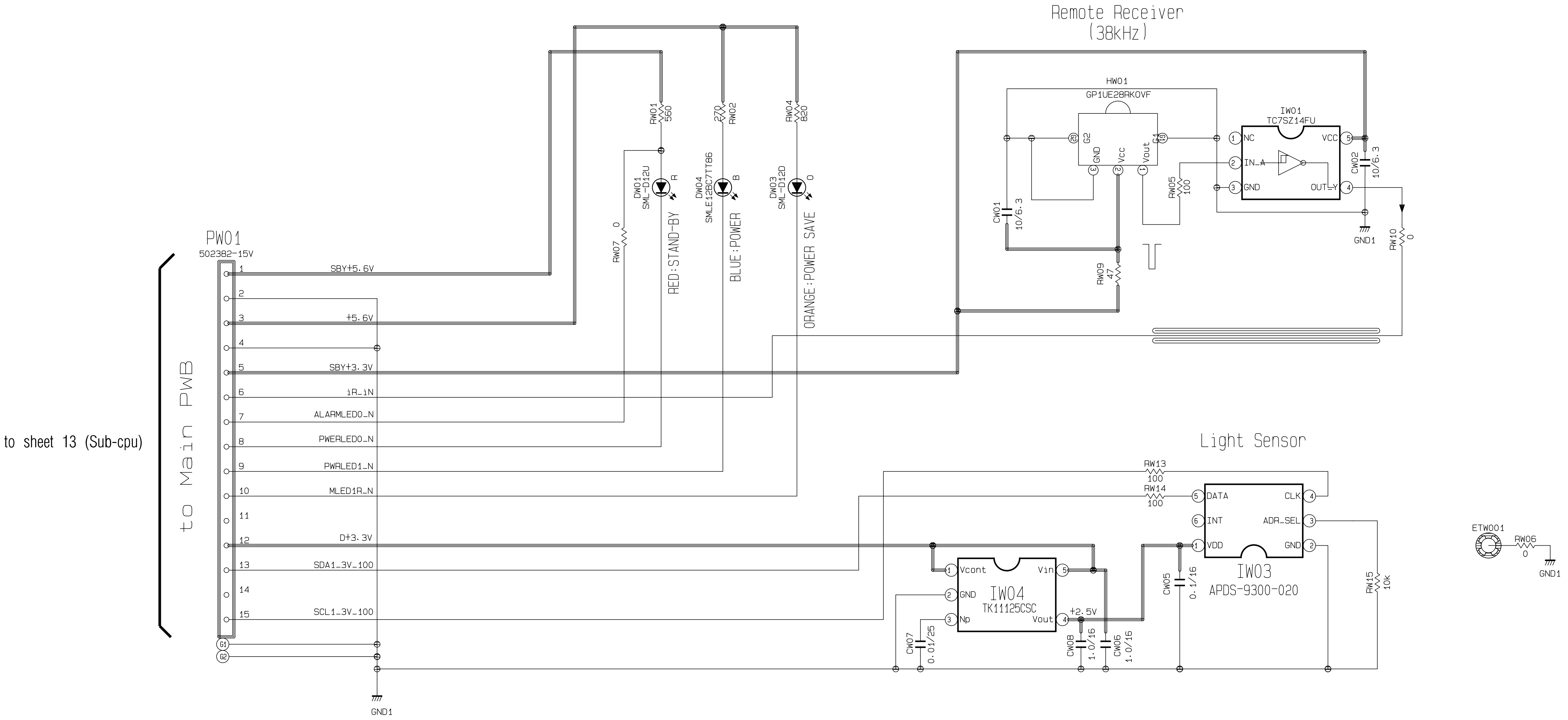
Remote Receiver
(38kHz)
HW01
GP1UE28RK0VF
G2
GND
Vcc
Vout
G1
IW01
TC7SZ14FU
NC
IN_A
GND
VCC
OUT_Y
CW01
10/6.3
CW02
10/6.3
RW05
100
RW09
47
RW10
0
GND1
RW01
560
RW02
270
RW04
820
RW07
0
DW01
SML-D12U
R
DW04
SMLE12BC7TT86
B
DW03
SML-D12D
O
RED:STAND-BY
BLUE:POWER
ORANGE:POWER SAVE
PW01
502382-15V
to Main PWB
to sheet 13 (Sub-cpu)
SBY+5.6V
+5.6V
SBY+3.3V
iR_iN
ALARMLEDO_N
PWERLEDO_N
PWRLED1_N
MLED1R_N
D+3.3V
SDA1_3V_100
SCL1_3V_100
G1
G2
GND1
Light Sensor
RW13
100
RW14
100
DATA
INT
VDD
CLK
ADR_SEL
GND
IW03
APDS-9300-020
IW04
TK11125CSC
Vcont
GND
Np
Vin
Vout
+2.5V
CW05
0.1/16
CW06
1.0/16
CW07
0.01/25
CW08
1.0/16
RW15
10K
ETW001
RW06
0
GND1

SUB BOARD SHEET: 01
LED

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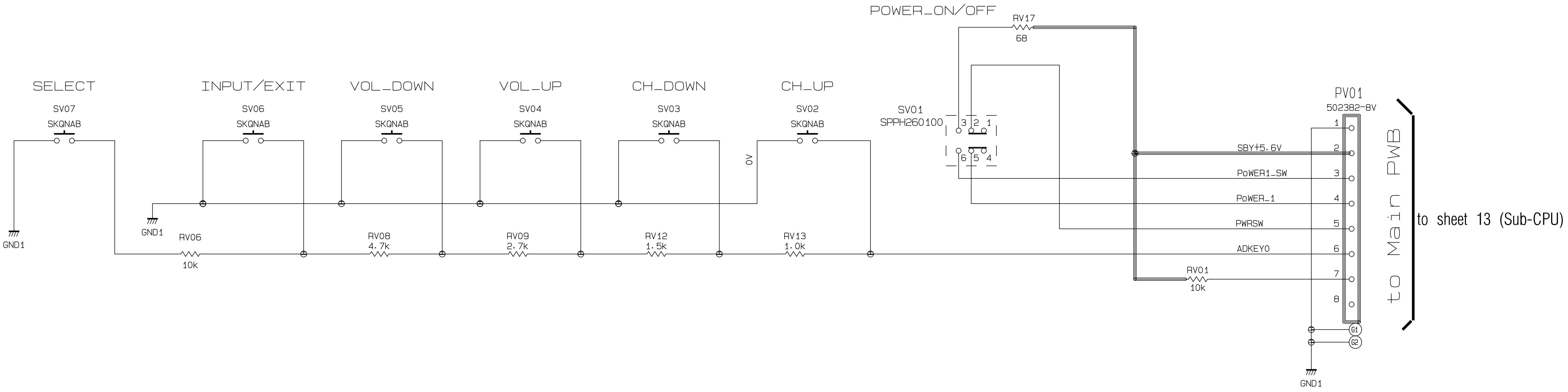
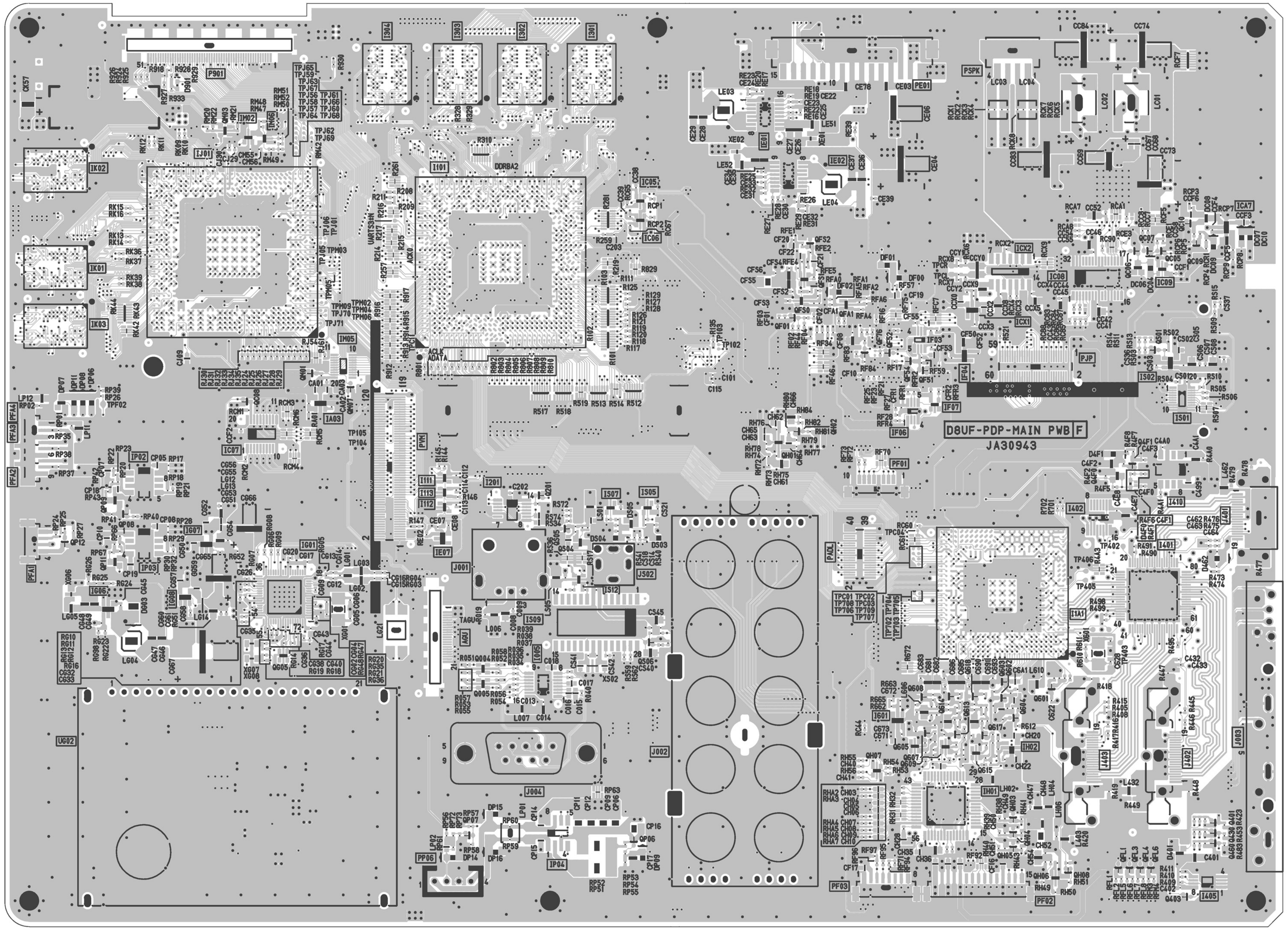
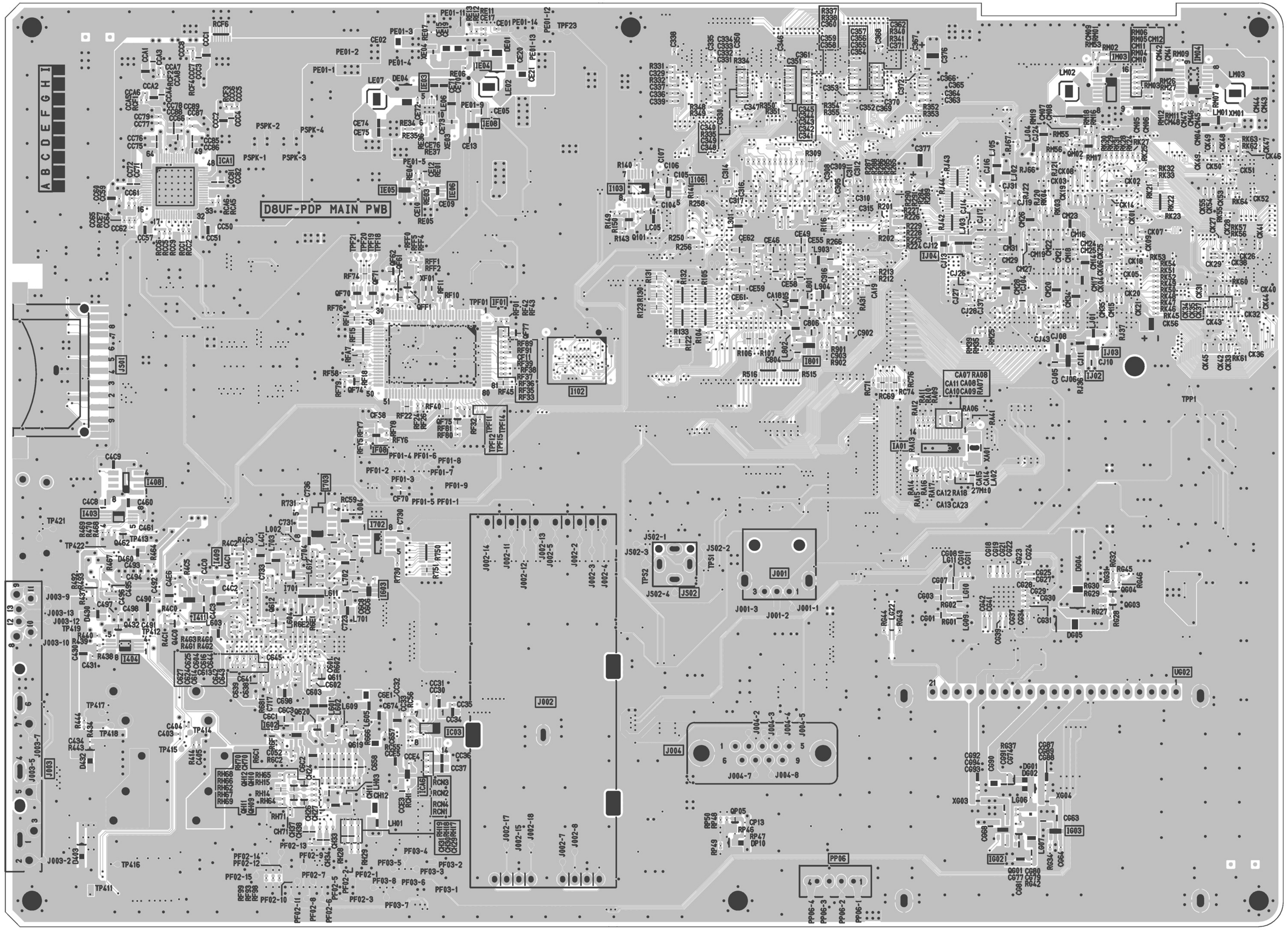

POWER_ON/OFF
RV17
68
SELECT
SV07
SKQNAB
INPUT/EXIT
SV06
SKQNAB
VOL_DOWN
SV05
SKQNAB
VOL_UP
SV04
SKQNAB
CH_DOWN
SV03
SKQNAB
CH_UP
SV02
SKQNAB
SV01
SPPH260100
3 2 1
6 5 4
0V
GND1
GND1
RV06
10k
RV08
4.7k
RV09
2.7k
RV12
1.5k
RV13
1.0k
PV01
502382-8V
1
2
3
4
5
6
7
8
G1
G2
SBY+5.6V
POWER1_SW
POWER_1
PWRSW
ADKEY0
RV01
10k
GND1
to Main PWB
to sheet 13 (Sub-CPU)

SUB BOARD SHEET: 02
CONTROL

Main Printed Circuit Board
P50S602, P50A402, P50A202
Top layer 'A'.


D8UF-PDP-MAIN PWB F
JA30943

Main Printed Circuit Board
P50S602, P50A402, P50A202
Bottom layer ‘H’.


D8UF-PDP MAIN PWB

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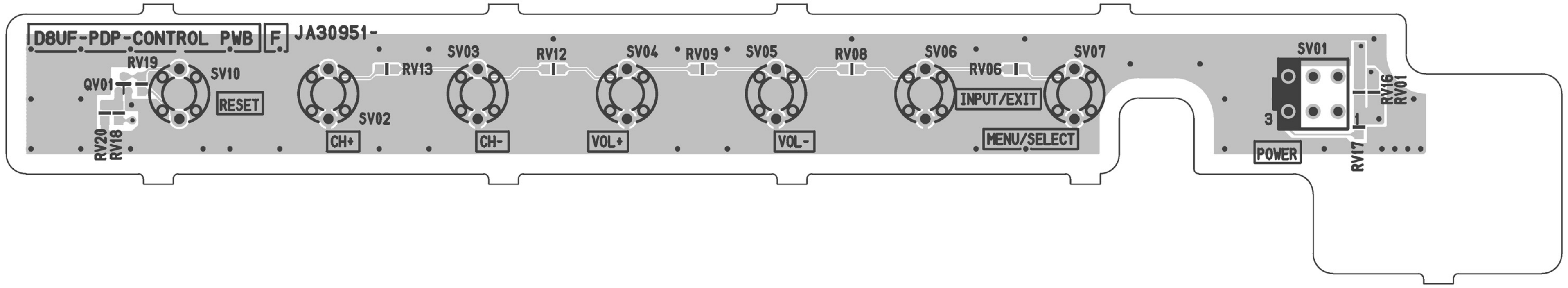
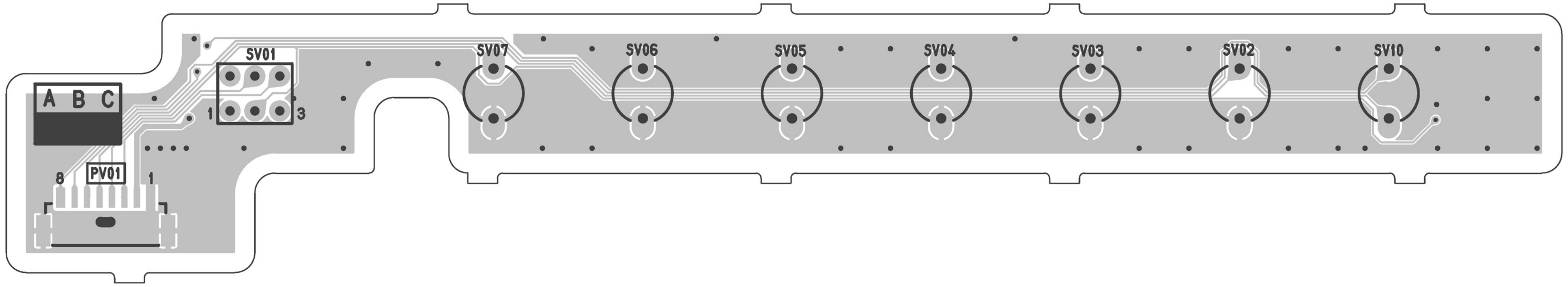
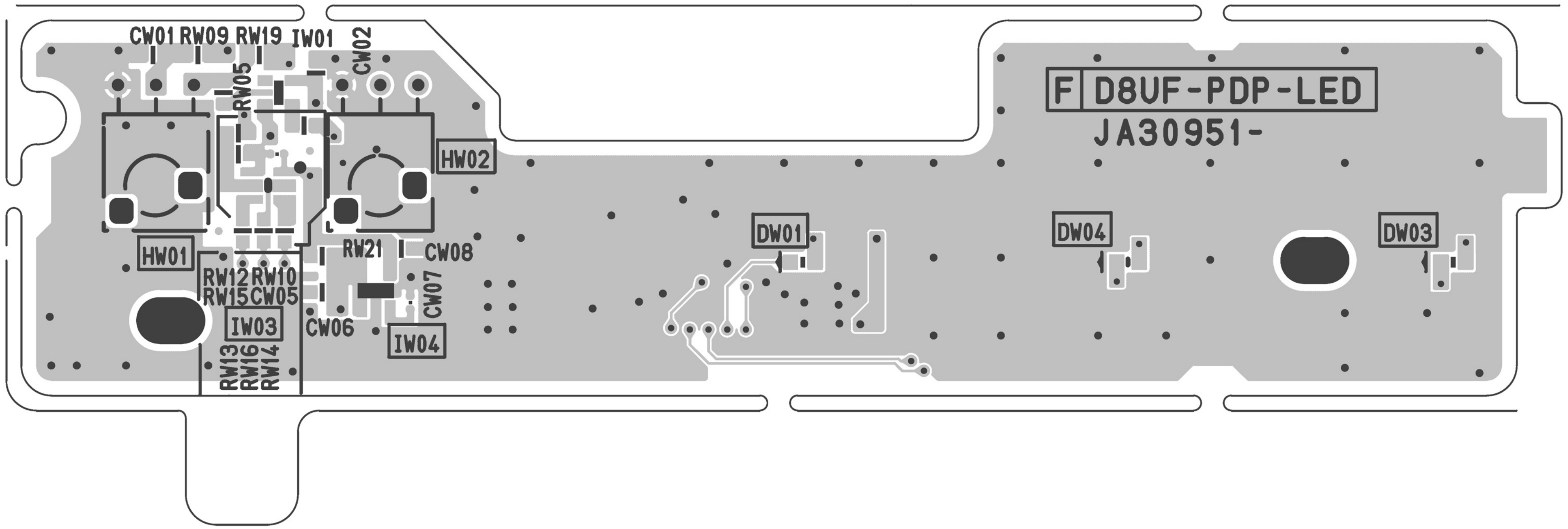
Control Printed Circuit Board
P50S602, P50A402, P50A202
Top layer 'A'


D8UF-PDP-CONTROL PWB
F
JA30951-
RV19
QV01
SV10
RESET
RV20
RV18
RV13
SV02
CH+
SV03
CH-
RV12
SV04
VOL+
RV09
SV05
VOL-
RV08
SV06
RV06
INPUT/EXIT
SV07
MENU/SELECT
SV01
3
POWER
RV16
RV01
RV17

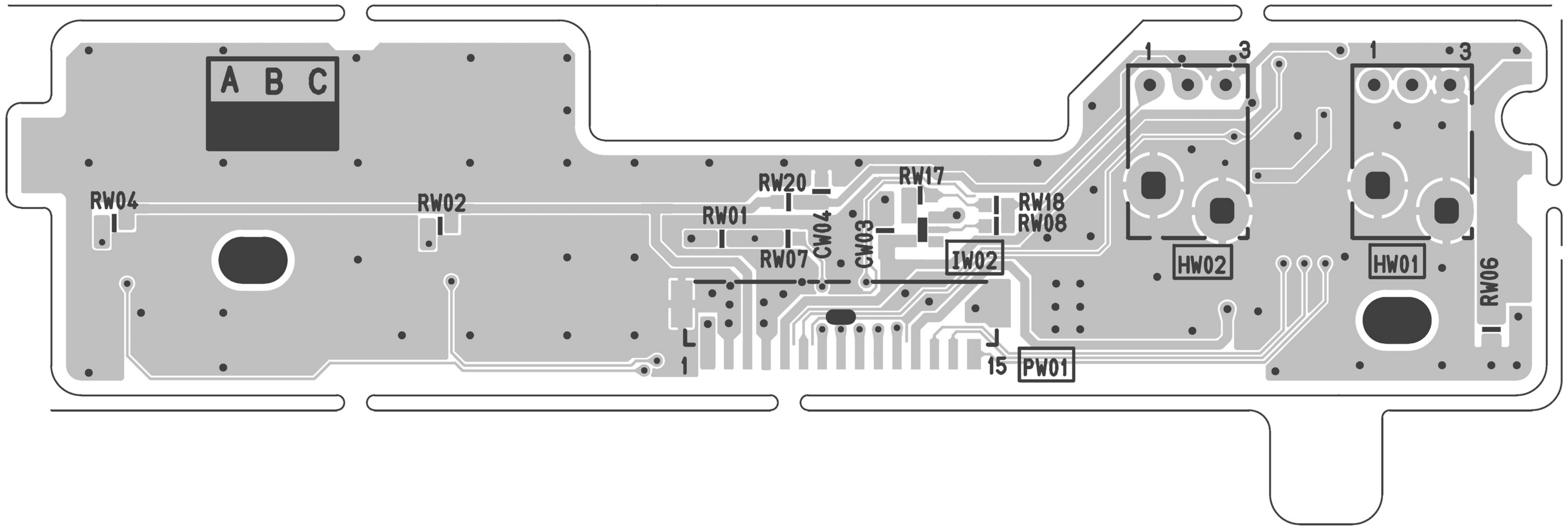
Control Printed Circuit Board
P50S602, P50A402, P50A202
Bottom layer 'D'


A B C
SV01
1
3
8
PV01
1
SV07
SV06
SV05
SV04
SV03
SV02
SV10

LED Printed Circuit Board
P50S602, P50A402, P50A202
Top layer 'A'


CW01
RW09
RW19
IW01
CW02
RW05
HW02
HW01
RW21
CW08
RW12
RW10
RW15
CW05
IW03
CW06
CW07
IW04
RW13
RW16
RW14
DW01
DW04
DW03
F D8UF-PDP-LED
JA30951-

LED Printed Circuit Board
P50S602, P50A402, P50A202
Bottom layer 'D'


A B C
RW04
RW02
RW20
RW17
RW01
RW18
RW08
RW07
CW04
CW03
IW02
1
3
1
3
HW02
HW01
RW06
1
15
PW01

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PART LIST

For P50S602/P50A402 and P50A202 models

SYMBOL	PART No.	DESCRIPTION	P50S602	P50A402	P50A202
BOARD ASSEMBLIES					
	SUB PWB ASSEMBLY				
A22	JP63872	PSA D8UF SUB-B	0	0	0
	MAIN PWB ASSEMBLY				
A12	UX34843	P50S602 MAIN PSA FOR SERVICE	0		
A13	UX34844	P50A402 MAIN PSA FOR SERVICE		0	
A14	UX34845	P50A202 MAIN PSA FOR SERVICE			0
FINAL ASSEMBLY					
	SPEAKERS				
SPB	GK01761	SPEAKER (L/R)	0	0	0
	CONNECTORS				
EAC	EF28365	2P VT-FASTON (#250) L=170MM CONNE.	0	0	0
ECM	EF29241	8P 1.25MM PITCH 502380 CONNE. (L=190MM)	0	0	0
ECN1	EF29005	51P 0.5MM PITCH LVDS CABLE L=150MM	0		
ECN1	EF29002	51P 0.5MM PITCH LVDS CABLE L=400MM		0	0
ECN23	EF29251	9P VH CONNE. #3 8NC L=330MM	0		
ECN23	EF21619	9P VH-VH CONNE. L=360MM #27NC		0	0
ECN6	EF29094	7P 2.0MM PITCH PAP CONNE. L=150MM	0		
ECN6	EF29093	7P 2.0MM PITCH PAP CONNE. L=240MM		0	0
EFAN1	EF29132	5P GH CONNE. L=340MM	0		
EFAN3	EF28124	6P GH-PAP/PAP CONNE. L=260/360MM	0		
EFAN4	EF28152	3P PAP-GH CONNE. L=200MM		0	0
EFG	EF29081	CO-01F-F0R0-900-SPS (L=90MM)	0	0	0
ELM	EF29261	15P 1.25MM PITCH 502380 CONNE. (L=100MM)	0	0	0
EPM	EF29451	15P PAP CONNE. L=510MM	0	0	0
ESP1	EF27908	4P PAP-FASTON #110/#187 CONNE. L=610/1	0	0	0
	FERRITE CORES				
NSP1	GX00738	MAGNET K5CRC12X15X7-MB2	0	0	0
	PANEL				
A	DD02662	FPF50C240135UC-21	0		
A	DD02612	FPF50C160135UC-21		0	0
	POWER UNIT				
F101	FN00563 ⚠	FUSE OF POWER SUPPLY UNIT (50CT - 10A 250V)	0	0	0
U1	HA02592 ⚠	POWER UNIT(1H439W-U)		0	0
U1	HA02602 ⚠	POWER UNIT - 1H445W-U	0		

SYMBOL	PART No.	DESCRIPTION	P50S602	P50A402	P50A202
	MISCELLANEOUS				
E901 ⚠	EP00342	AC INNLET 10DKDG3S	0	0	0
MFAN1	GS01592	FAN (DC MOTOR:DC3110RL-04W-S19-C06)	0		
MFAN1	GS00696	FAN (DC MOTOR:DC2406KL-04W-B29-T0E)		0	0
MFAN2	GS01591	FAN (DC MOTOR:DC3110RL-04W-S19-C05)	0		
MFAN3	GS01581	FAN (DC MOTOR:DC2406RL-04W-S39-C01)	0		
MFAN4	GS01581	FAN (DC MOTOR:DC2406RL-04W-S39-C01)	0		
	FRONT FILTER				
#0800	KS23011K	50BS02EM36%F.FILTER	0		
#0800	KS23012K	50BS02EM31%F.FILTER		0	
#0800	KS23061	50SC02EM36%F.FILTER			0
	STAND SUPPORT ASSEMBLY				
#800C	QJ05201	D8U P STAND MST	0		
#810A	QJ05051	D8J P WST SUPPORT	0		
#818A	MJ03973	SCRW M3M 6*25/+SM	0		
#820	MJ03693	SCRW M3M_6*18HX+SM SWRM12A	0	0	0
#812	QJ05651	D8U FIX COMBO STAND ASSY		0	0
	BEZEL& BACK COVER ASSEMBLY				
#200C	QD63832	D8U P50S602 BZL ASSY	0		
#200D	QD63833	D8U P50A402 BZL ASSY		0	0
#700B	QA04312	D8U P50X BACK COVER	0		
#700A	QA04311	D8U P50 BACK COVER		0	0
	ACCESSORIES				
E01	EV01841	POWER CORD 125V10A UL/CSA	0	0	0
N01	QR75561	P50S602 INSTRUCTION BOOK	0		
N01	QR75582	A402/202 INSTRUCTION BOOK		0	0
N205	QR69063	TV GUIDE DAILY INSTRUCTION BOOK	0		
U01	HL02564	REMOTE CONTROL UNIT CLU-4984S	0	0	0

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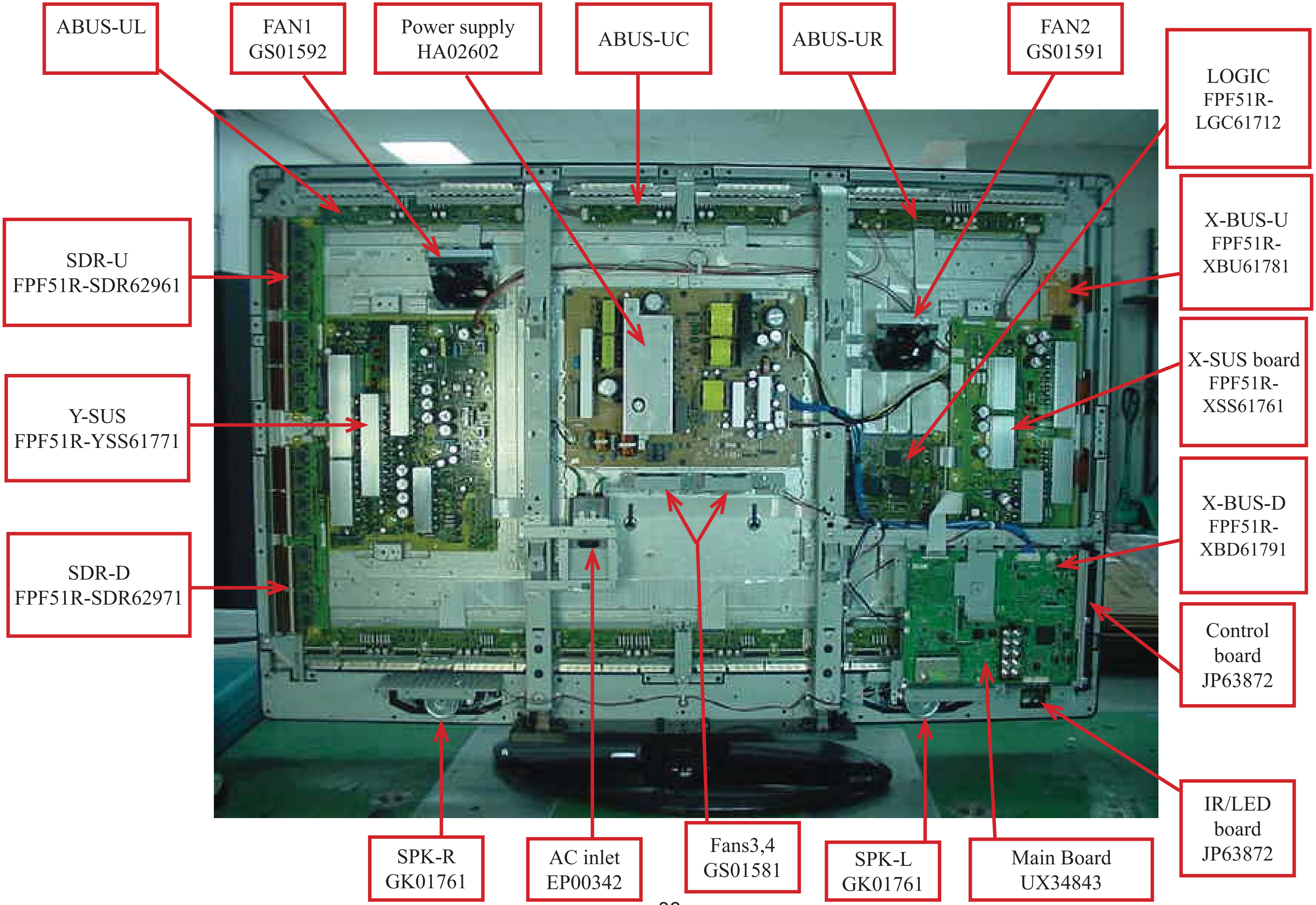
PANEL-DD02662
ALL ABUS PWB
PART OF PANEL

P50S602 MODEL MAIN PARTS VIEW


ABUS-UL
FAN1 GS01592
Power supply HA02602
ABUS-UC
ABUS-UR
FAN2 GS01591
LOGIC FPF51R-LGC61712
SDR-U FPF51R-SDR62961
Y-SUS FPF51R-YSS61771
SDR-D FPF51R-SDR62971
X-BUS-U FPF51R-XBU61781
X-SUS board FPF51R-XSS61761
X-BUS-D FPF51R-XBD61791
Control board JP63872
IR/LED board JP63872
SPK-R GK01761
AC inlet EP00342
Fans3,4 GS01581
SPK-L GK01761
Main Board UX34843

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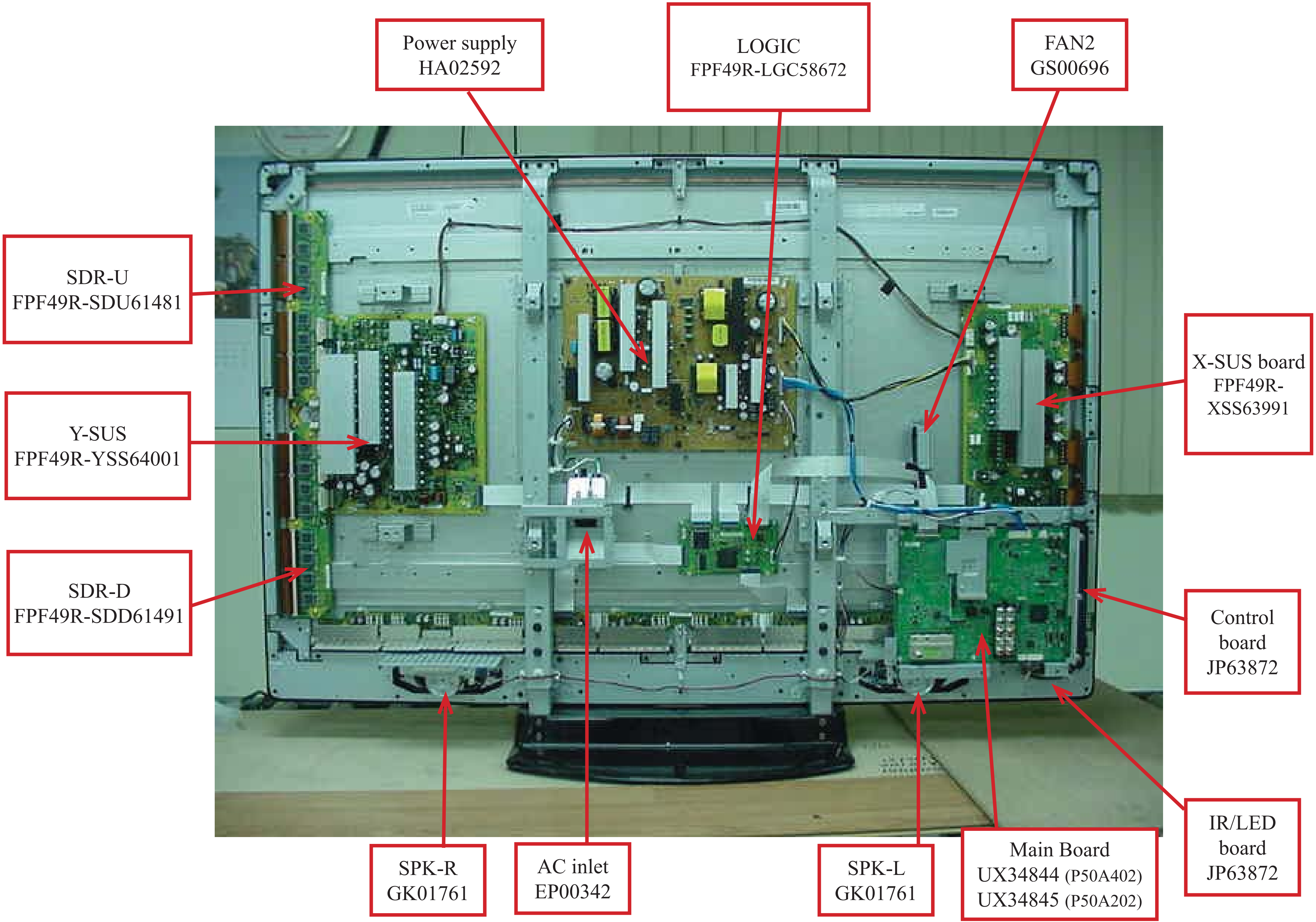
PANEL-DD02612
ALL ABUS PWB
PART OF PANEL

P50A402/202 MODEL MAIN PARTS VIEW



Power supply
HA02592

LOGIC
FPF49R-LGC58672

FAN2
GS00696

SDR-U
FPF49R-SDU61481

Y-SUS
FPF49R-YSS64001

X-SUS board
FPF49R-
XSS63991

SDR-D
FPF49R-SDD61491

Control
board
JP63872

IR/LED
board
JP63872

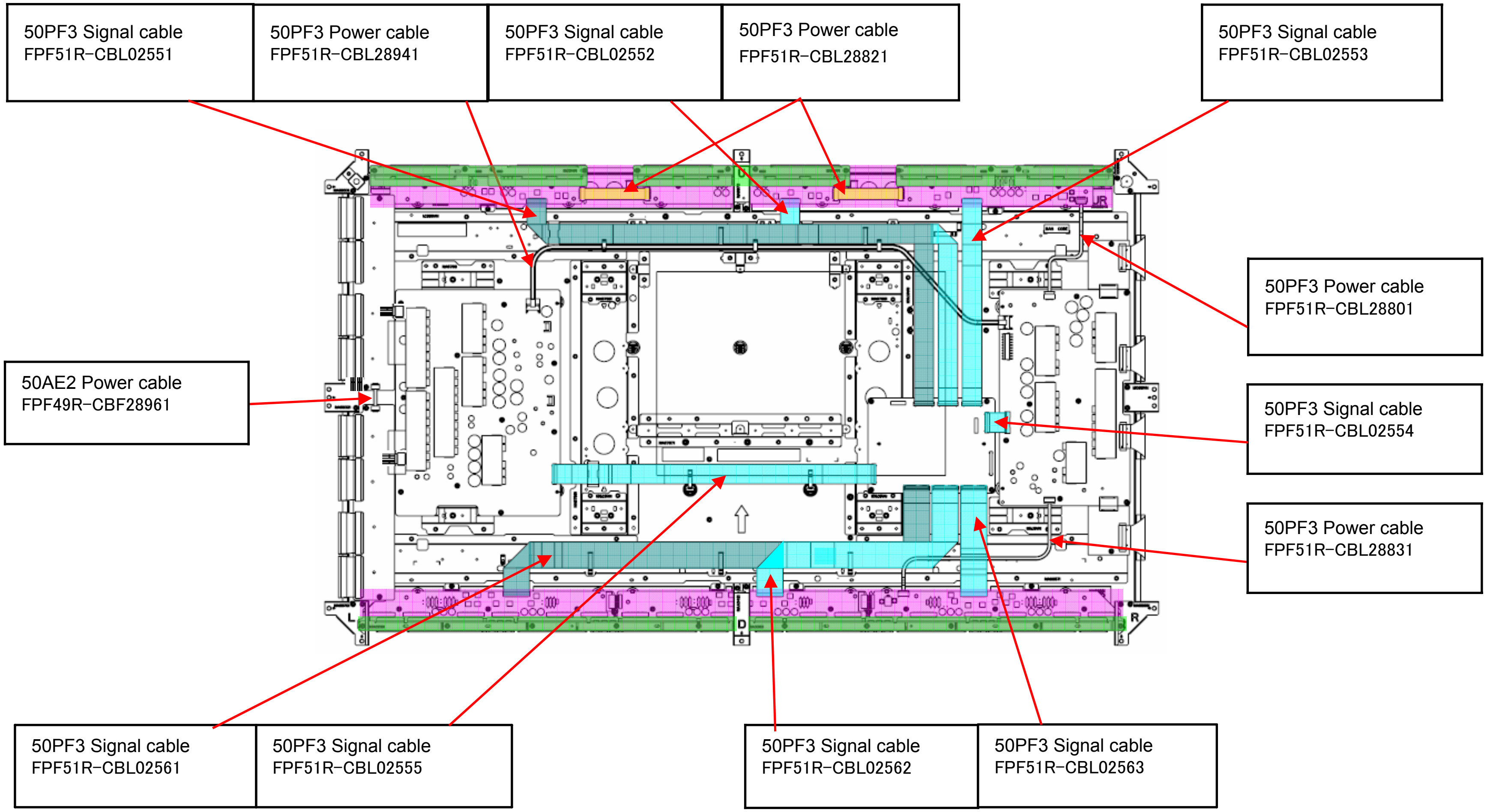
SPK-R
GK01761

AC inlet
EP00342

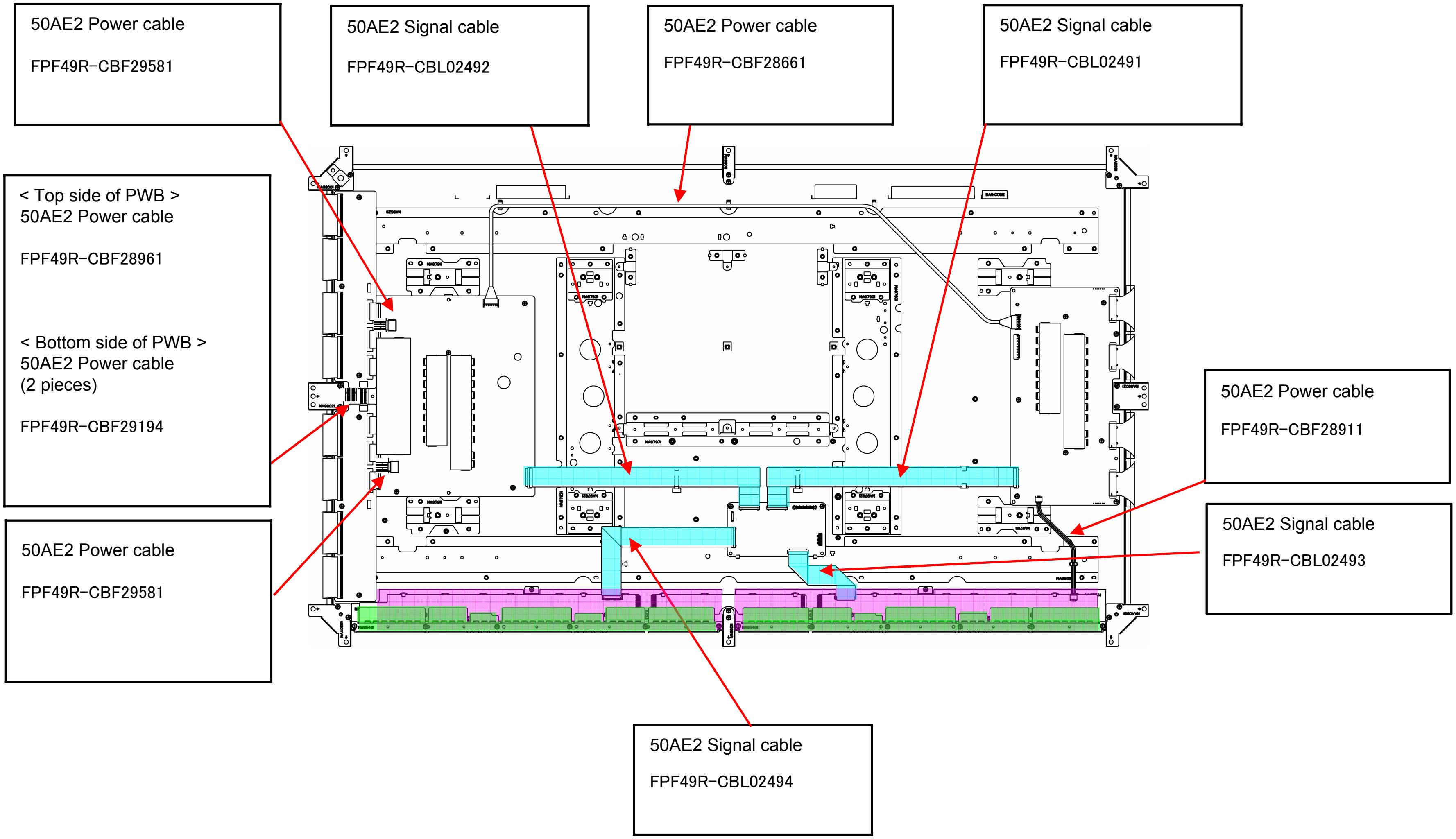
SPK-L
GK01761

Main Board
UX34844 (P50A402)
UX34845 (P50A202)

P50S602 Connector repair parts of the Panel.


50PF3 Signal cable
FPF51R-CBL02551
50PF3 Power cable
FPF51R-CBL28941
50PF3 Signal cable
FPF51R-CBL02552
50PF3 Power cable
FPF51R-CBL28821
50PF3 Signal cable
FPF51R-CBL02553
50PF3 Power cable
FPF51R-CBL28801
50AE2 Power cable
FPF49R-CBF28961
50PF3 Signal cable
FPF51R-CBL02554
50PF3 Power cable
FPF51R-CBL28831
50PF3 Signal cable
FPF51R-CBL02561
50PF3 Signal cable
FPF51R-CBL02555
50PF3 Signal cable
FPF51R-CBL02562
50PF3 Signal cable
FPF51R-CBL02563
L
R
D
UR

P50A402, P50A202 Connector repair parts of the Panel.



50AE2 Power cable

FPF49R-CBF29581

50AE2 Signal cable

FPF49R-CBL02492

50AE2 Power cable

FPF49R-CBF28661

50AE2 Signal cable

FPF49R-CBL02491

< Top side of PWB >
50AE2 Power cable

FPF49R-CBF28961

< Bottom side of PWB >
50AE2 Power cable
(2 pieces)

FPF49R-CBF29194

50AE2 Power cable

FPF49R-CBF29581

50AE2 Power cable

FPF49R-CBF28911

50AE2 Signal cable

FPF49R-CBL02493

50AE2 Signal cable

FPF49R-CBL02494

HITACHI

PA NO. 0235
MADE IN MEXICO